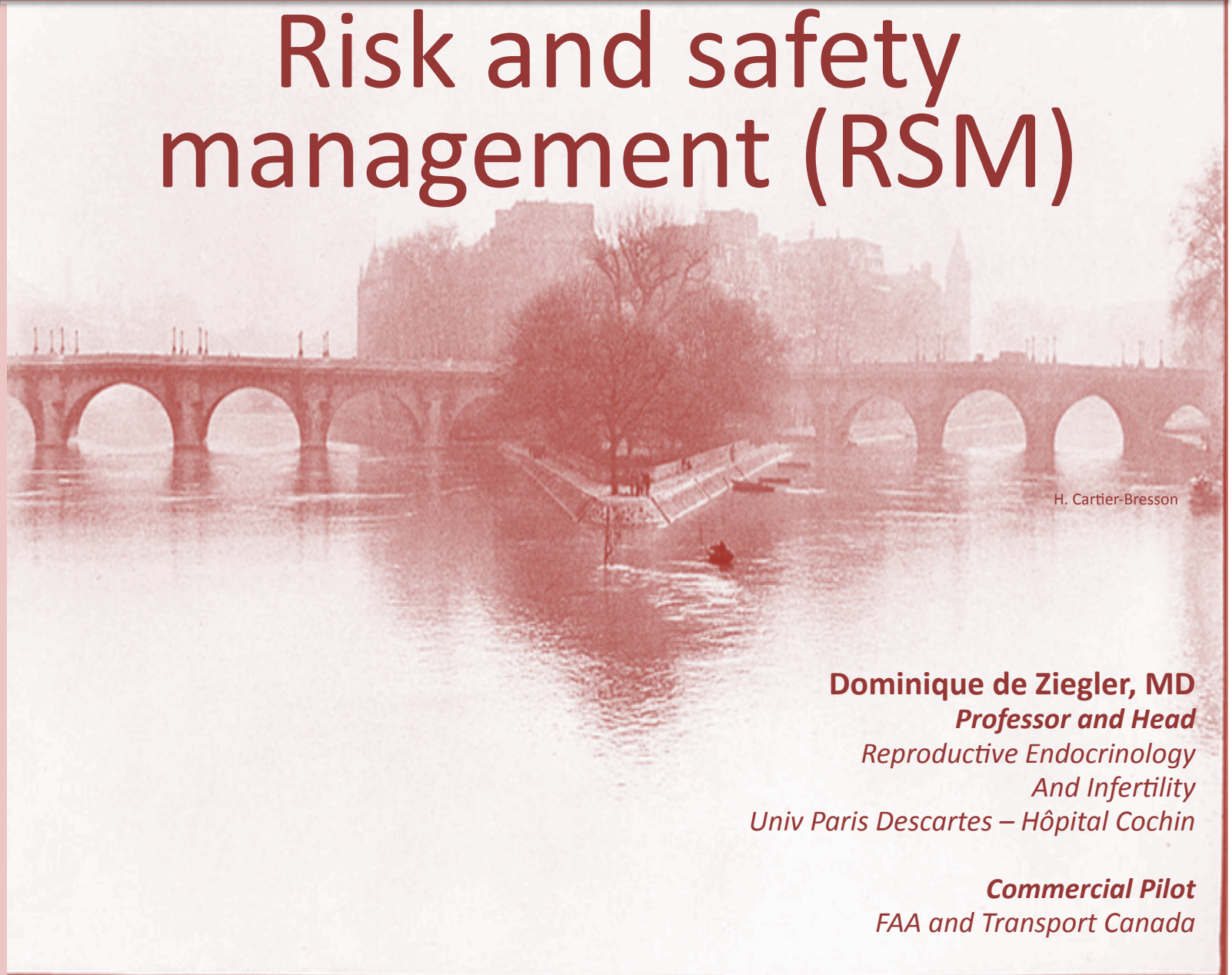


What if ART became the first ultra-safe medicine?

Risk and safety management (RSM)



H. Cartier-Bresson

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Paris-
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Dominique de Ziegler, MD
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And Infertility
Univ Paris Descartes – Hôpital Cochin

Commercial Pilot
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What if ART became the first ultra-safe medicine?

Risk and safety management (RSM)

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The challenge: entering the Dr's office

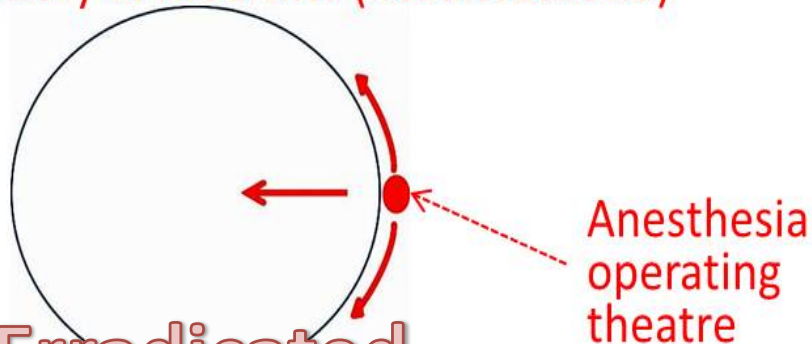
What if ART became the first ultra-safe medicine?

At high-risk areas of medicine:
OR, ICUS, DR, etc.

In the heart of medicine: the
Dr's office where errors start.

A) Centripetal process

Part of SMS applied at the high-risk
periphery of medicine (i.e. anesthesia)



Erradicated
the mega-mistakes

What if ART became the first ultra-safe medicine?

At high-risk areas of medicine:
OR, ICUS, DR, etc.

A) Centripetal process

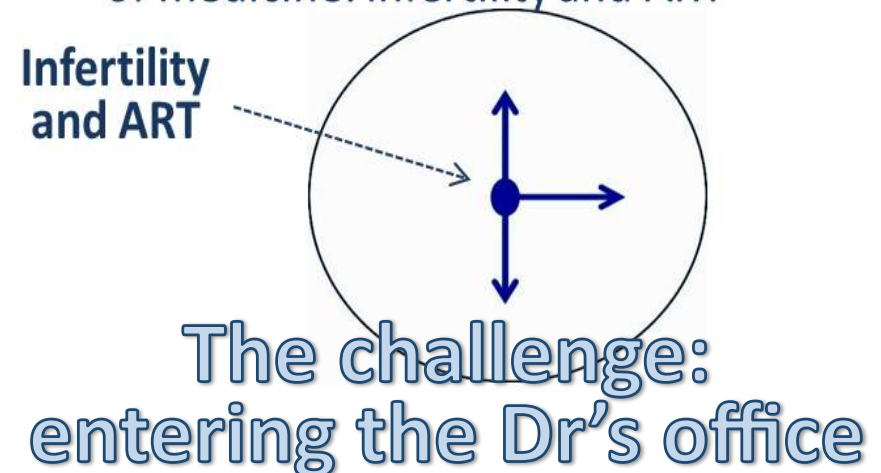
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ε -SMS applied in a privileged domain
of medicine: infertility and ART



What if ART became the first ultra-safe medicine?

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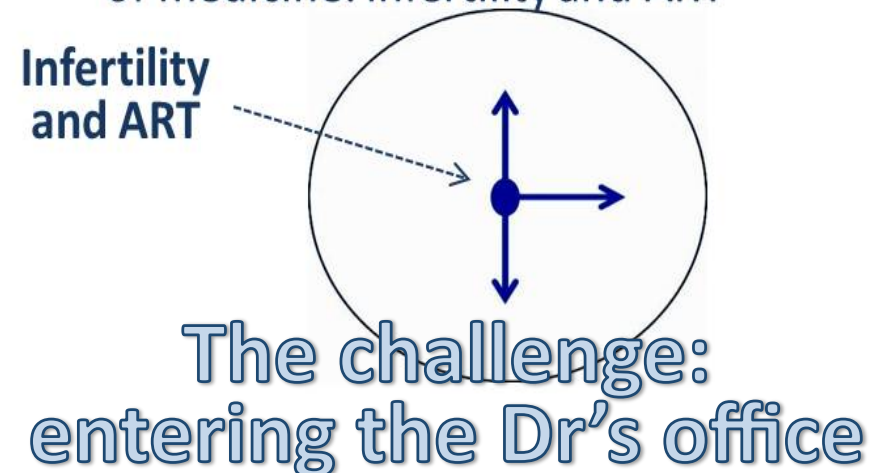
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What if ART became the first ultra-safe medicine?

1. Hazards and risks
2. Accident, errors and defenses
- 3. Clinical risks in ART**

H & R

Errors-
defenses

Clin risks

Av-med

Error rp

Wht-u-do

4. From aviation to medicine
5. Error reporting
6. 'Say what you do' approach

What if ART became the first ultra-safe medicine?

1. Hazards and risks

H & R

Errors-
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Wht-u-do



What if ART became the first ultra-safe medicine?

1. Hazards and risks

Hazard:
'potential source
of danger'

Risk:
'the possibility that
something unpleasant
happens'

H & R

Errors-
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Wht-u-do



What if ART became the first ultra-safe medicine?

1. Hazards and risks

Hazard:
'Height'

Risk:
'to slip, which may
cause falling'

Risk mitigation

H & R

Errors-
defenses

Clin risks

Av-med

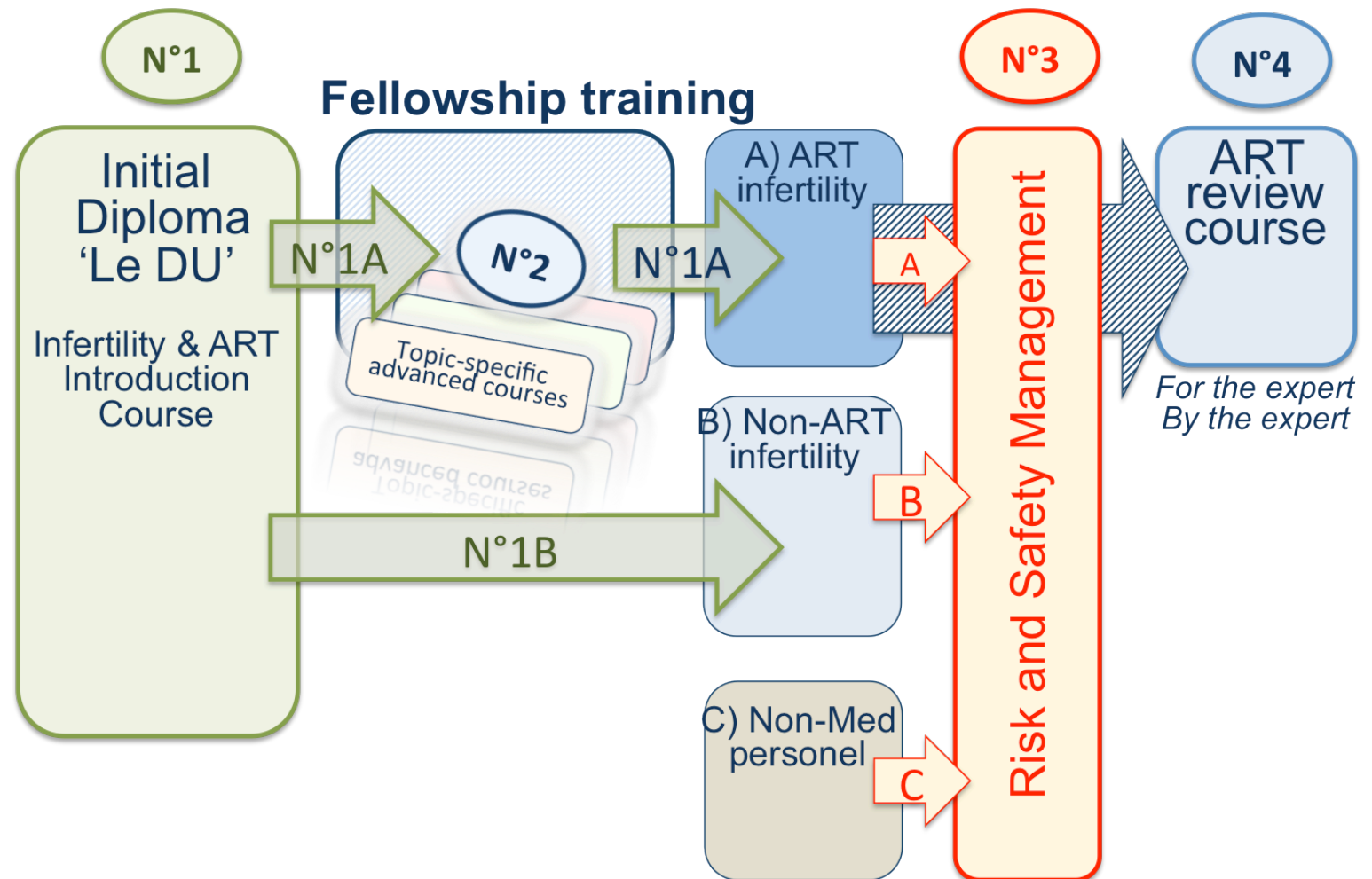
Error rp

Wht-u-do



What if ART became the first ultra-safe medicine?

Global Education Offer in Infertility and ART



H & R

Errors-
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Error rp

Wht-u-do

What if ART became the first ultra-safe medicine?

2. Accident, errors and defenses

In medicine, **Errors** occurring at the **‘sharp-end’** of the process, are committed by doctors and nurses. They are the **‘active failures’**.

Many have no adverse consequences. Conversely, incidents and accidents do not necessarily result from clearly identified sharp-end errors.

H & R

Errors-
defenses

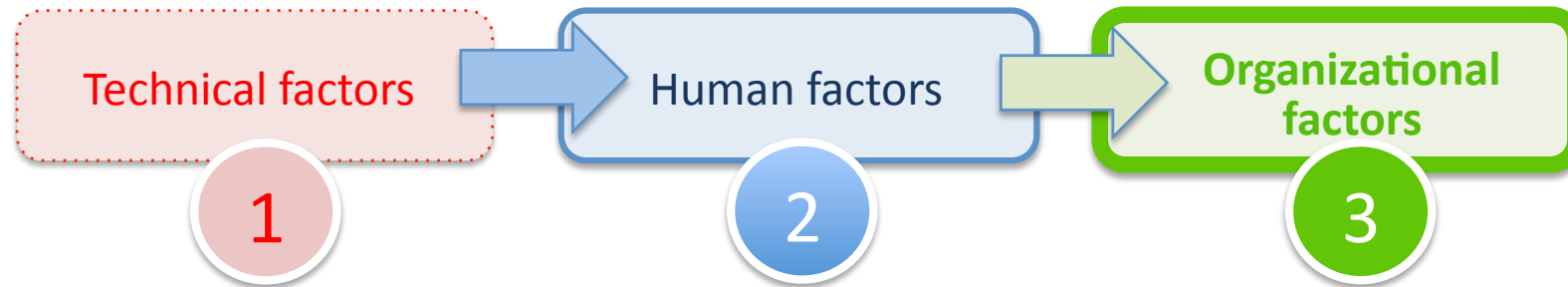
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Wht-u-do

What if ART became the first ultra-safe medicine?



What if ART became the first ultra-safe medicine?

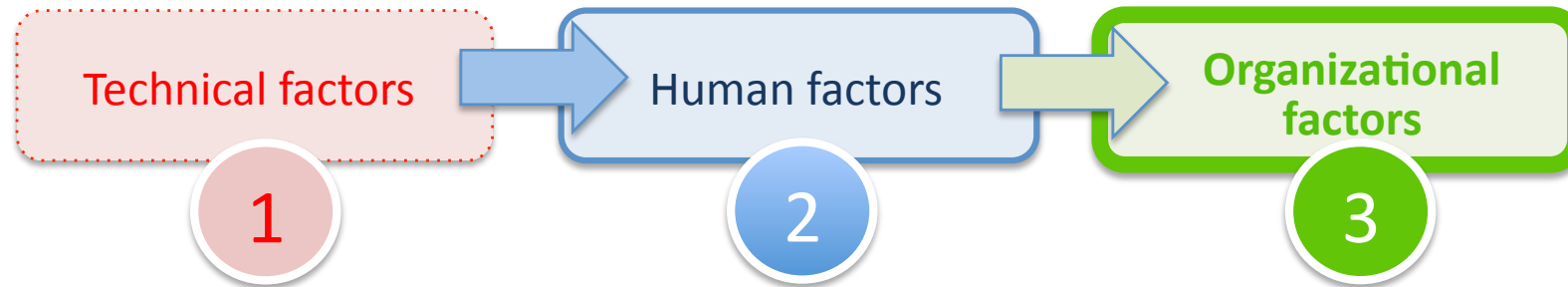
Technical factors

Human factors

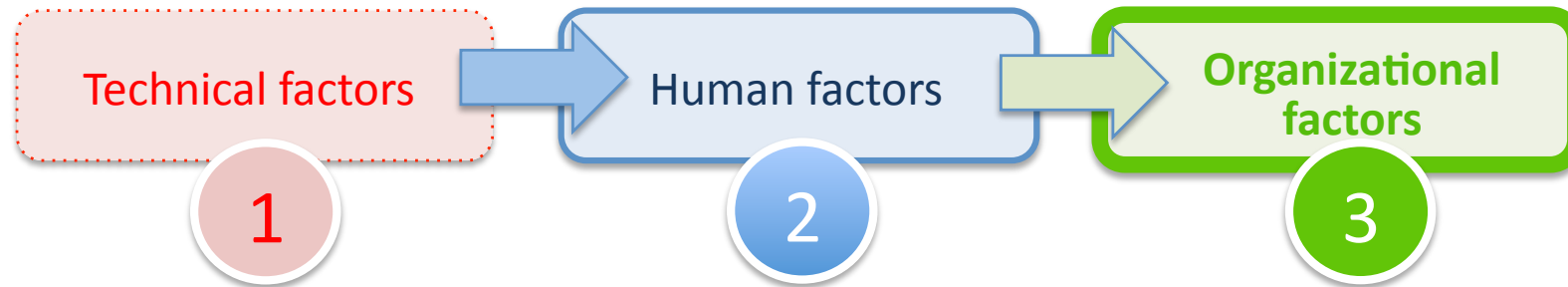
1



What if ART became the first ultra-safe medicine?



What if ART became the first ultra-safe medicine?



What if ART became the first ultra-safe medicine?

2. Accident, errors and defenses

Setting defenses:

- Positioning (accident)
- Redundancy (independent)
- Not infringe daily operation

H & R

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Accident

H & R

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What if ART became the first ultra-safe medicine?

2. Accident, errors and defenses

H & R

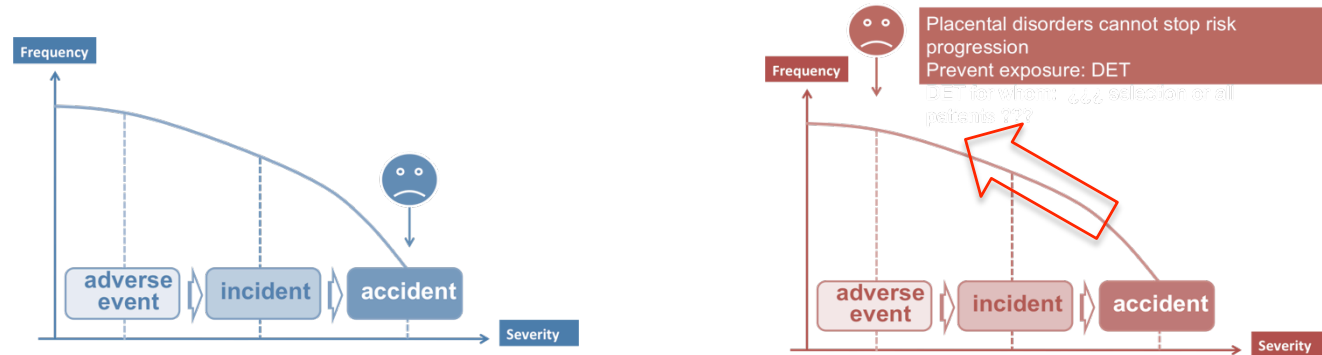
Errors-
defenses

Clin risks

Av-med

Error rp

Wht-u-do



	Insignificant	Minor	Moderate	Major	Catastrophic
Almost certain					
Likely					
Possible					
Unlikely					
Exceptional					

Likelihood

Severity

What if ART became the first ultra-safe medicine?

3. Clinical risks in ART

H & R

Errors-
defenses

Clin risks

Av-med

Error rp

Wht-u-do

Operational

Surgical mishap:

Hemorrhage
Bowel injury
Bladder injury

Infectious proces:

Tubo-ovarian abscess
Other abscess
Peritonitis

Functional

OHSS

Pregnancy

Twin pregnancy

Placentation
disorders: prre-
eclampsia, SGA, PTL,
etc.

Personal

Cardio-vasc

VTE risk,

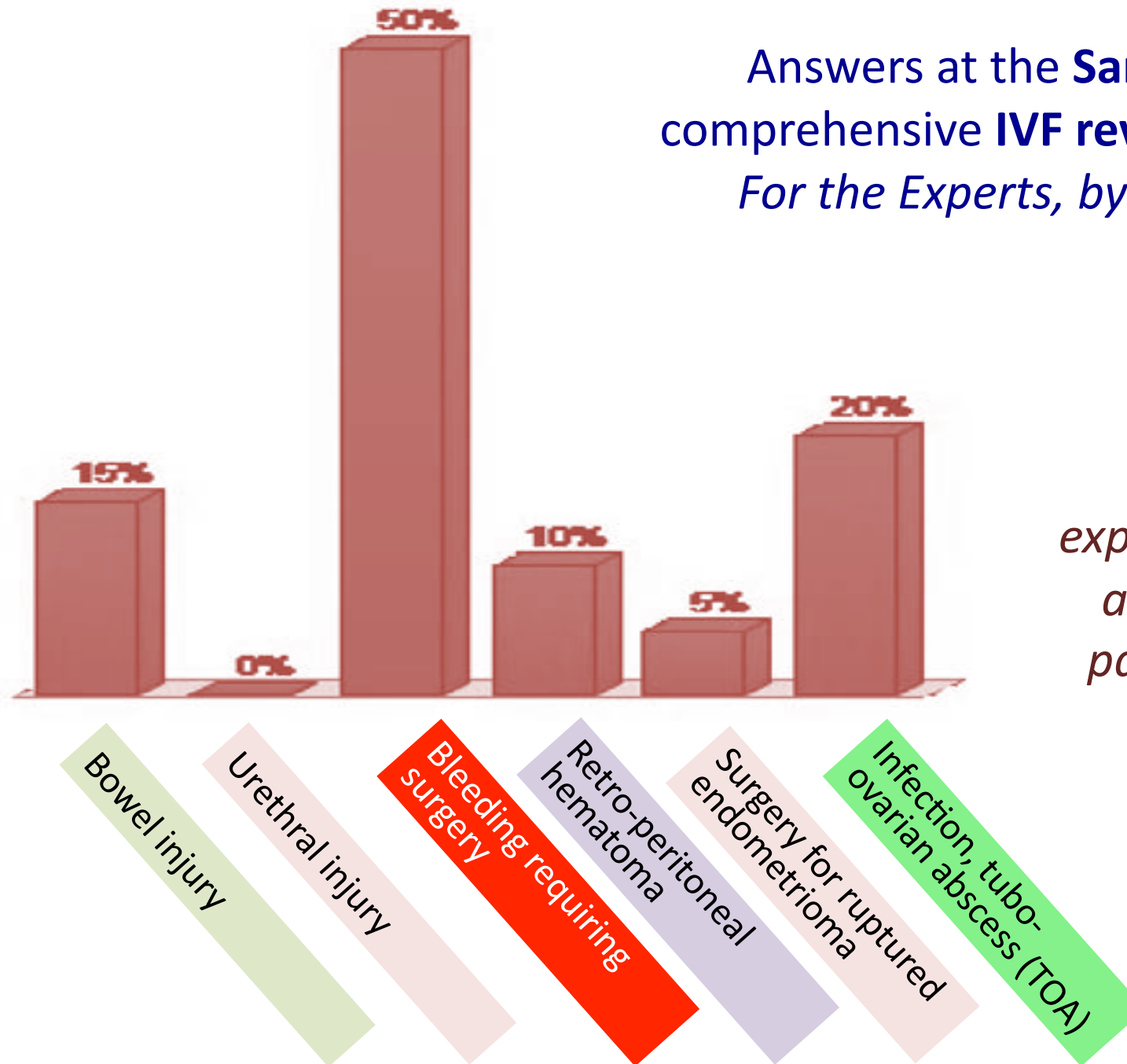
Genetic

XO,
FRAXA,
CFTR,
etc.

Uterine

Fibroids
malformation, scar, etc

Answers at the **Santa Barbara**
comprehensive **IVF review course**
For the Experts, by the Experts



*Personal
experience of
approx 300
participants*

What if ART became the first ultra-safe medicine?

3. Clinical risks in ART

H & R

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What if ART became the first ultra-safe medicine?



1. Impending OHSS risk
2. Adverse event: measures taken
3. Incident: hospitalization and paracenteses
4. Accident: organ failure (may be fatal)

H & R

Errors-
defenses

Clin risks

Av-med

Error rp

Wht-u-do

What if ART became the first ultra-safe medicine?

3. Clinical risks in ART

H & R

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What if ART became the first ultra-safe medicine?

3. Clinical risks in ART

Vascular: VTE

H & R

Errors-
defenses

Clin risks

Av-med

Error rp

Wht-u-do

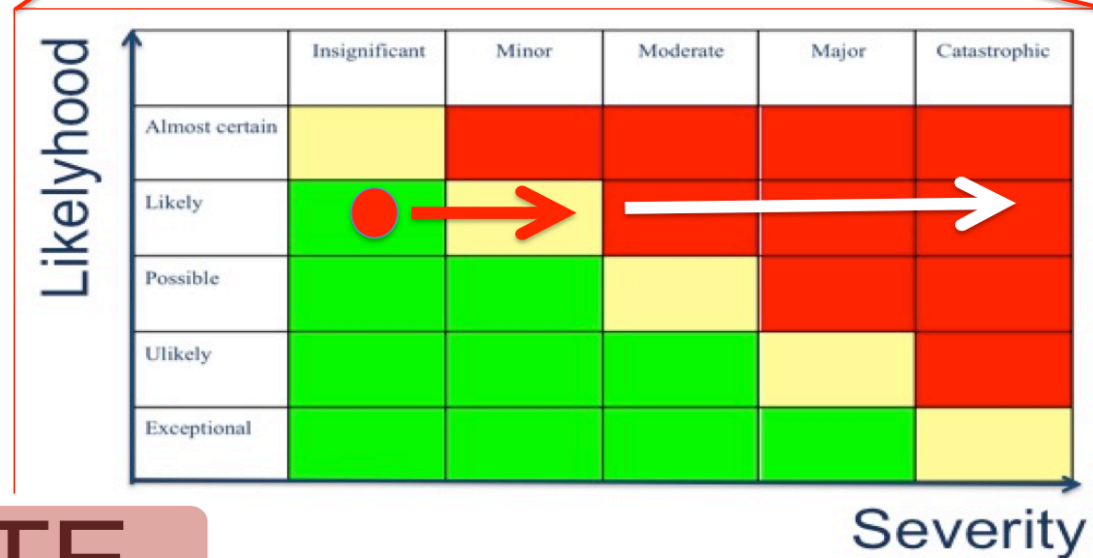
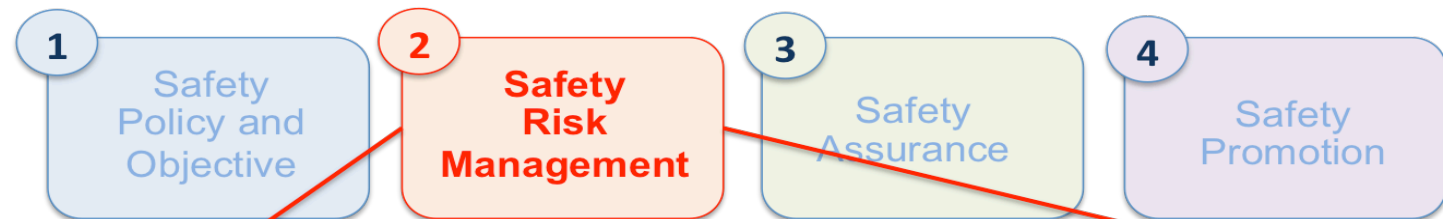
Certain persons at increased risk of VTE for genetic reasons need LMW heparin for preventing possibly lethal accidents

If individuals at risk are missed at inclusion stage, risk dynamic is OCCULT, as no sign predict impending accidents

What if ART became the first ultra-safe medicine?

3. Clinical risks in ART

Vascular: VTE



VTE

H & R

Errors-defenses

Clin risks

Av-med

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Wht-u-do

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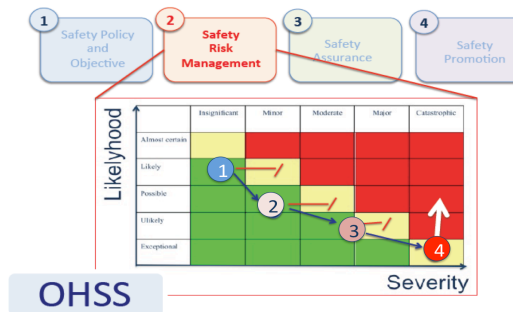
Av-med

Error rp

Wht-u-do

Avoid
accident

OHSS



Adequate treatment of
OHSS:

- Orient pts to institution
- Train ER doc on OHSS

What if ART became the first ultra-safe medicine?

H & R

Errors-
defenses

Clin risks

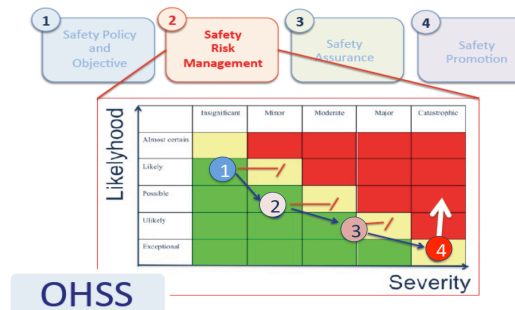
Av-med

Error rp

Wht-u-do

Avoid
accident

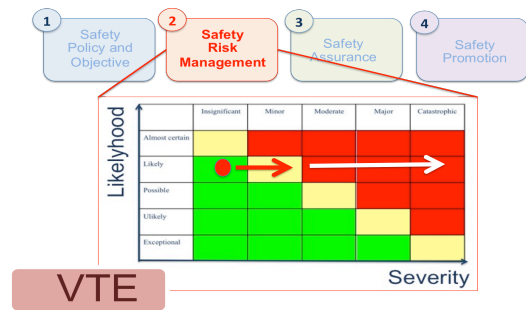
OHSS



Adequate treatment of
OHSS:

- Orient pts to institution
- Train ER doc on OHSS

VTE



Identify women at risk
who need heparin:

- Standardize screening question

What if ART became the first ultra-safe medicine?

4. From aviation to medicine

H & R

Errors-
defenses

Clin risks

Av-med

Error rp

Wht-u-do



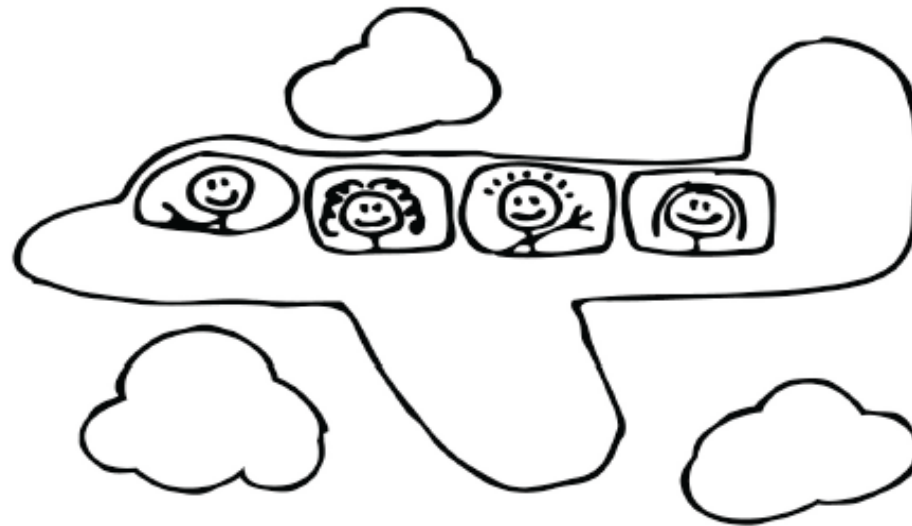
The challenge:
entering the Dr's office

What if ART became the first ultra-safe medicine?

4. From aviation to medicine

Difference 1: Efficacy is not a variable in aviation, it is in medicine

Difference 2: Motives for traveling not considered, in medicine indication is key.



H & R

Errors-
defenses

Clin risks

Av-med

Error rp

Wht-u-do

What if ART became the first ultra-safe medicine?

4. From aviation to medicine

H & R

Errors-
defenses

Clin risks

Av-med

Error rp

Wht-u-do



What if ART became the first ultra-safe medicine?

4. From aviation to medicine

Comparisons of medicine to aviation have in general taken for reference the **airline segment of aviation**

Yet, most of medicine bears too little resemblance to airline operation

Medicine however is closer to other segments of aviation such as notably, **helicopter flying**

H & R

Errors-
defenses

Clin risks

Av-med

Error rp

Wht-u-do

What if ART became the first ultra-safe medicine?

4. From aviation to medicine

H & R

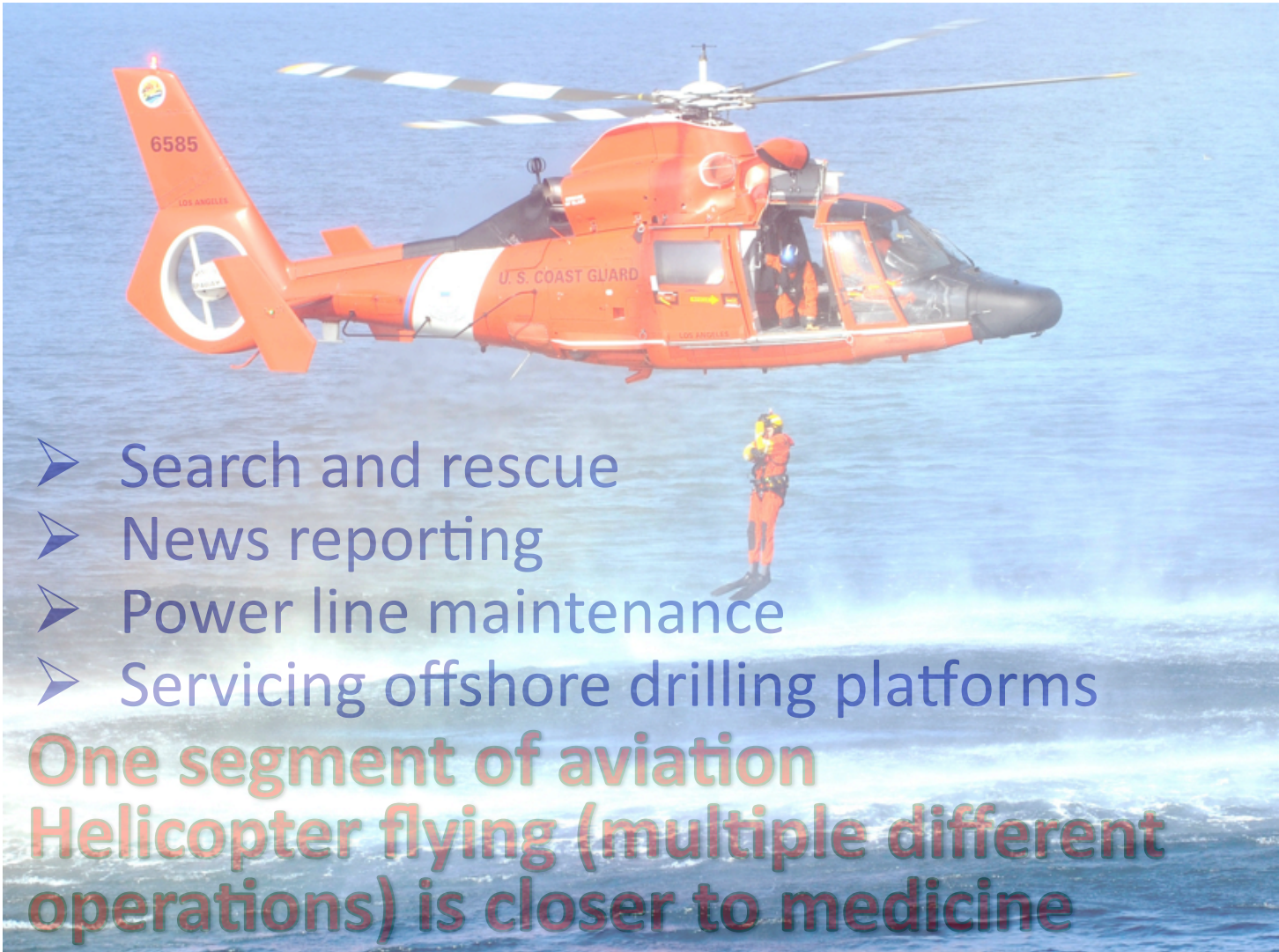
Errors-
defenses

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Av-med

Error rp

Wht-u-do

- 
- Search and rescue
 - News reporting
 - Power line maintenance
 - Servicing offshore drilling platforms

**One segment of aviation
Helicopter flying (multiple different
operations) is closer to medicine**

What if ART became the first ultra-safe medicine?

4. From aviation to medicine

H & R

Errors-
defenses

Clin risks

Av-med

Error rp

Wht-u-do



Offshore operations to oil platforms:
Enacted repetitive procedure-defined operations with
near-airline safety standards

Infertility and ART bears the potential of being the
'offshore operation' of medicine rising safety levels
through procedures and responsible RSM.

What if ART became the first ultra-safe medicine?

5. Error reporting

Three-tier approach to error reporting and establishing return on experience

i. Automatic

ii. Mandatory

iii. Voluntary non-punitive reporting

H & R

Errors-
defenses

Clin risks

Av-med

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Wht-u-do

What if ART became the first ultra-safe medicine?

6. 'Say what you do' approach

H & R

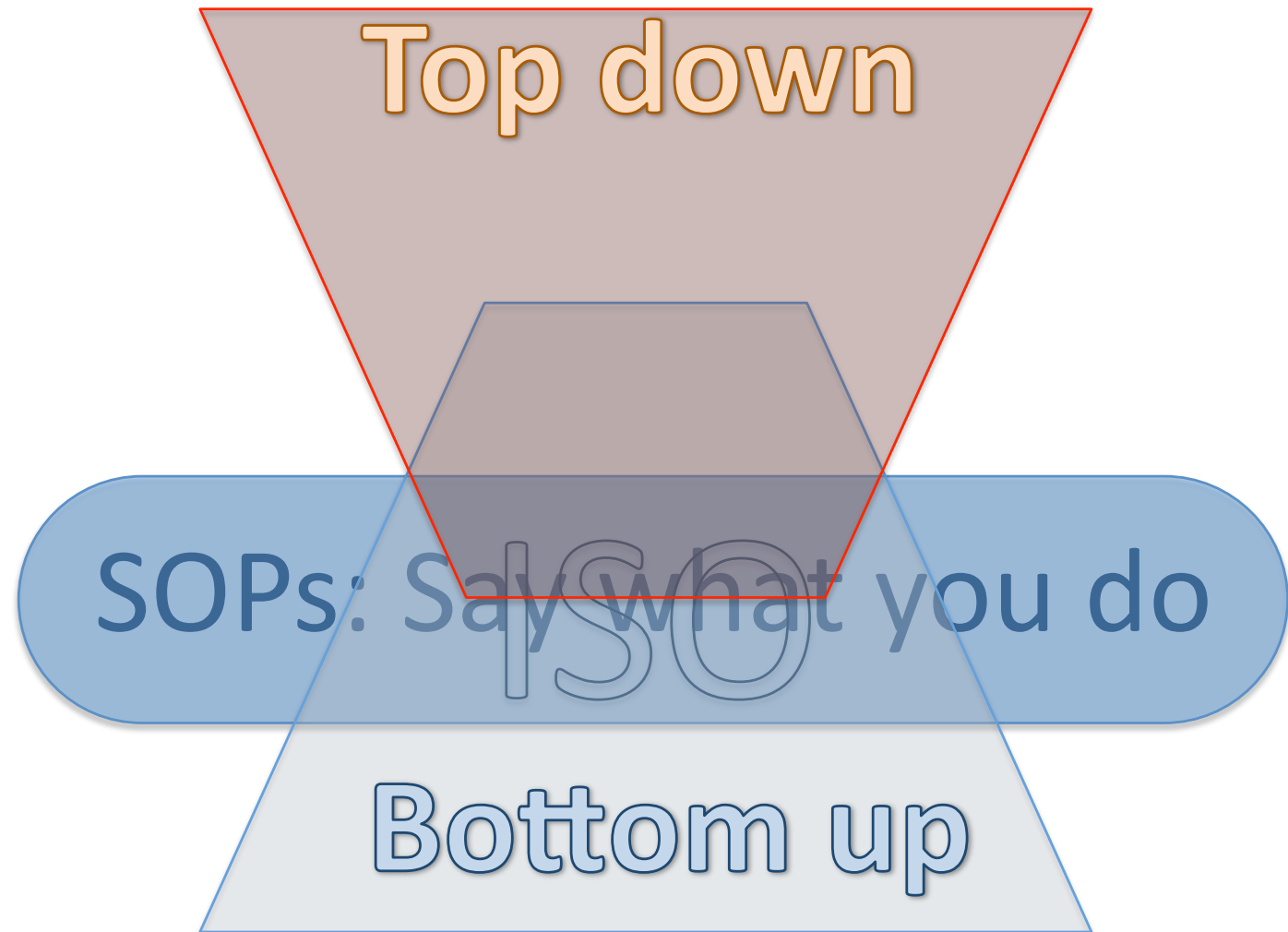
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What if ART became the first ultra-safe medicine?

H & R

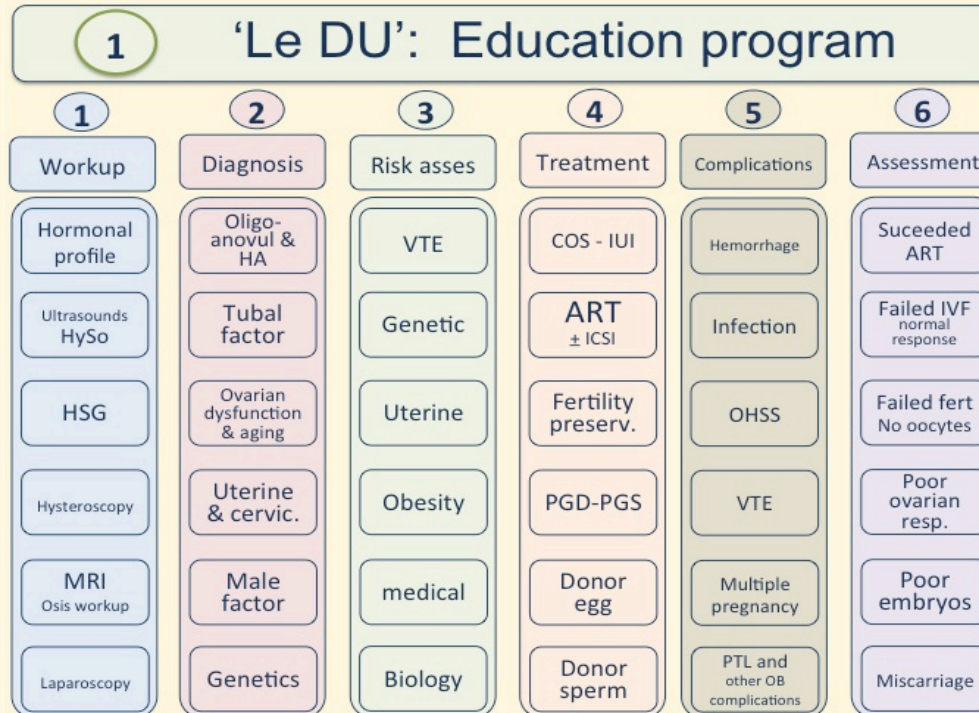
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Wht-u-do



Must know level

Nice to know level

Expert level

What if ART became the first ultra-safe medicine?

H & R

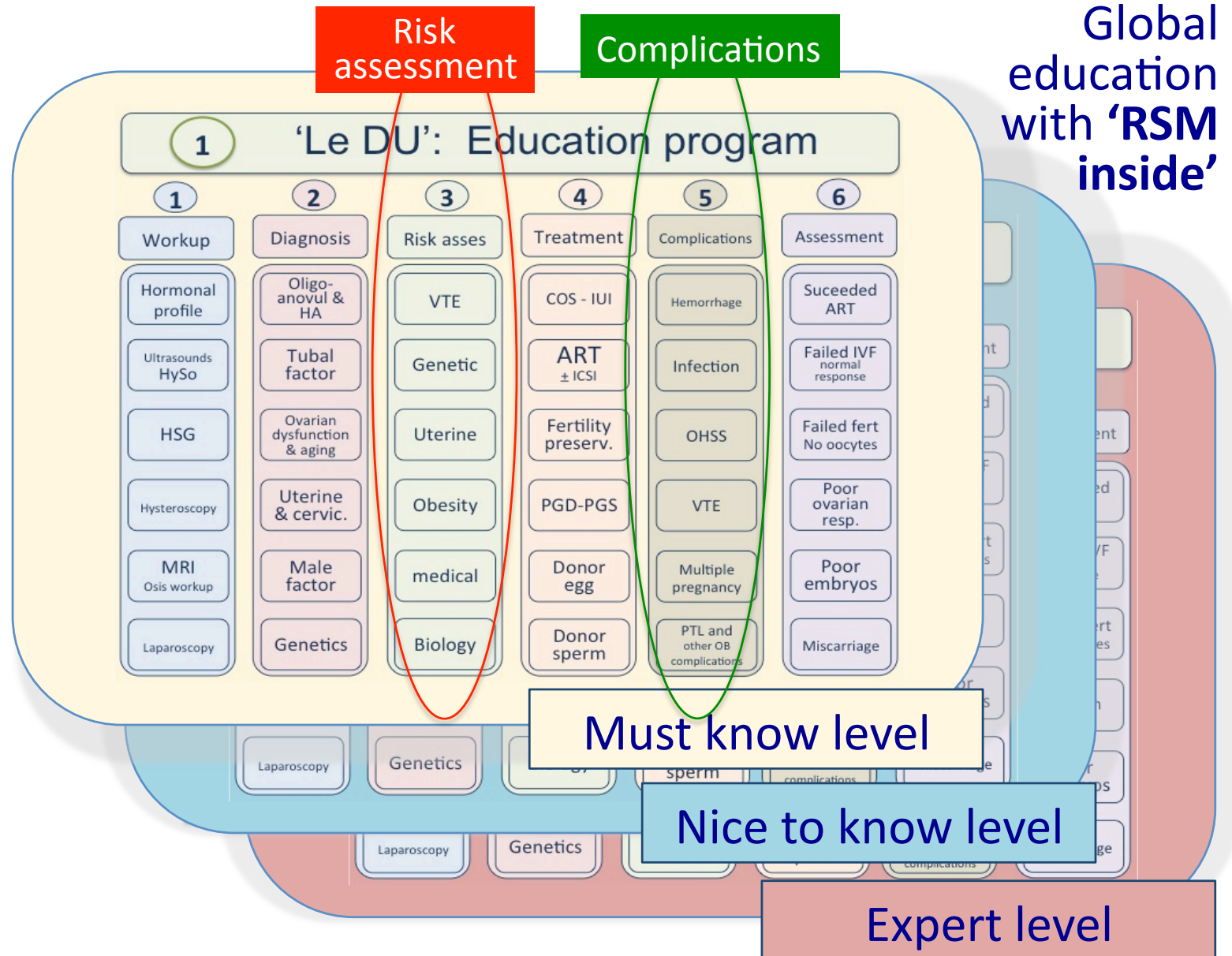
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Wht-u-do



What if ART became the first ultra-safe medicine?

Risk and safety management (RSM)

A semi-transparent image of a helicopter in flight over a river, with a bridge visible in the background. The image is overlaid with a red tint and serves as a background for the title and speaker information.

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