

SAFETY CHALLENGES IN ARTHROPLASTY - SURGEON'S VIEWS



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Second vice president EFORT

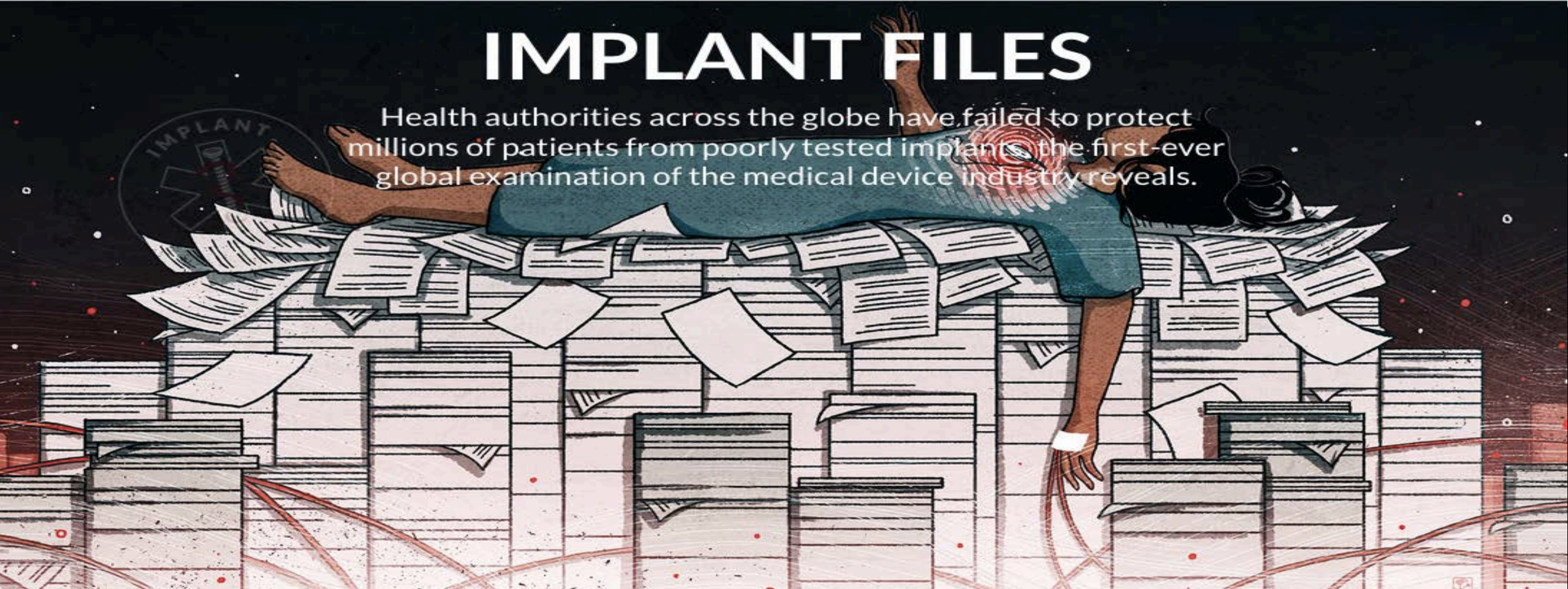
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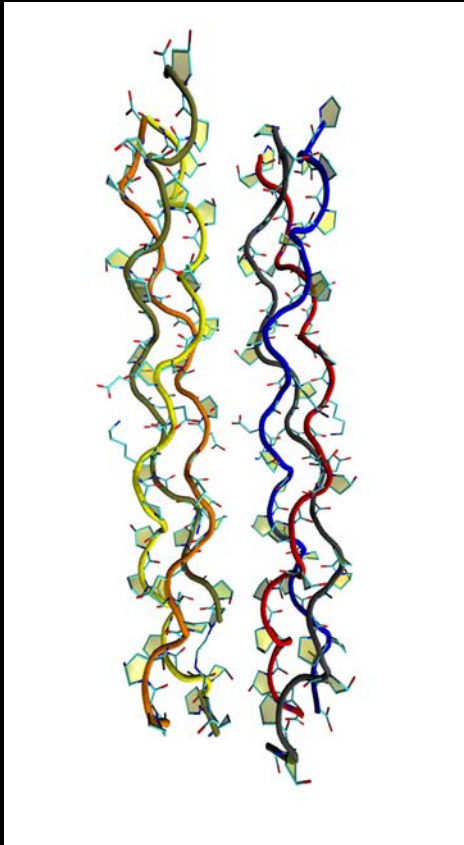
IMPLANT FILES

Health authorities across the globe have failed to protect millions of patients from poorly tested implants, the first-ever global examination of the medical device industry reveals.



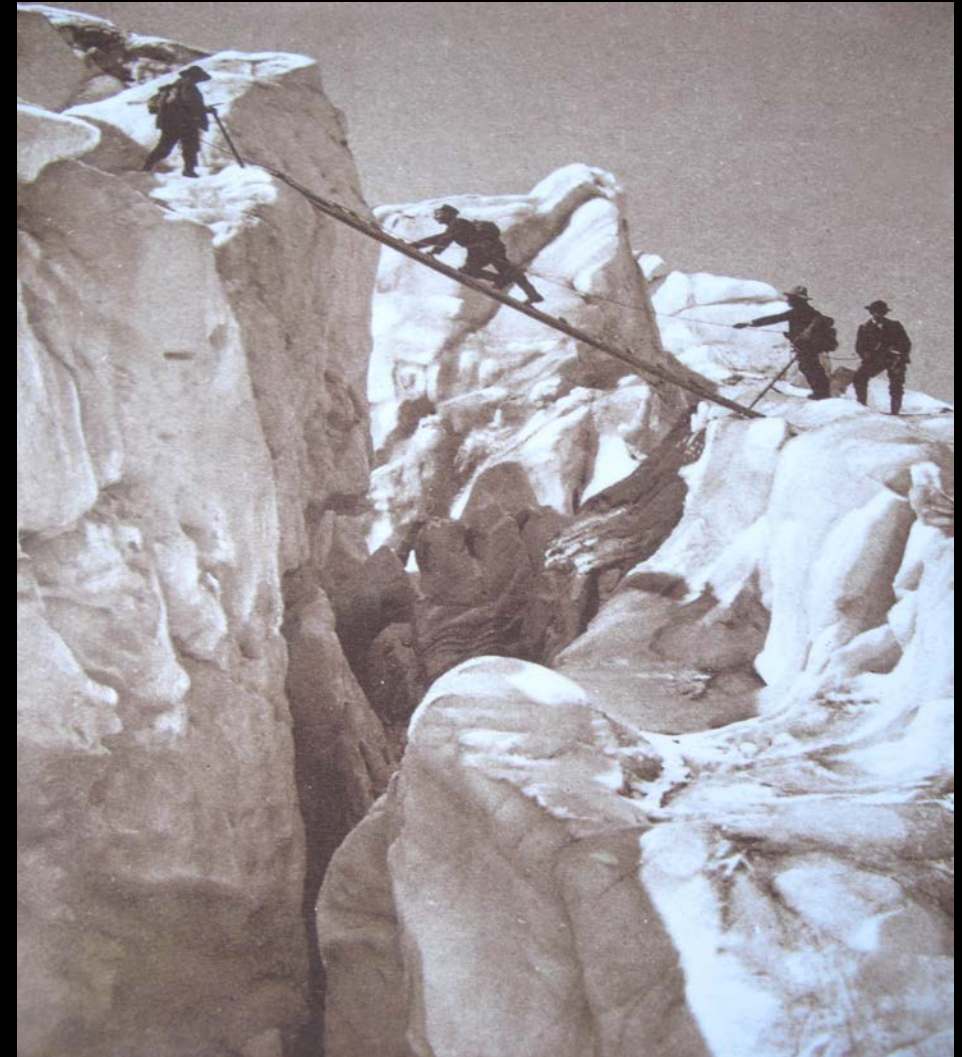
<https://www.icij.org/investigations/implant-files/>

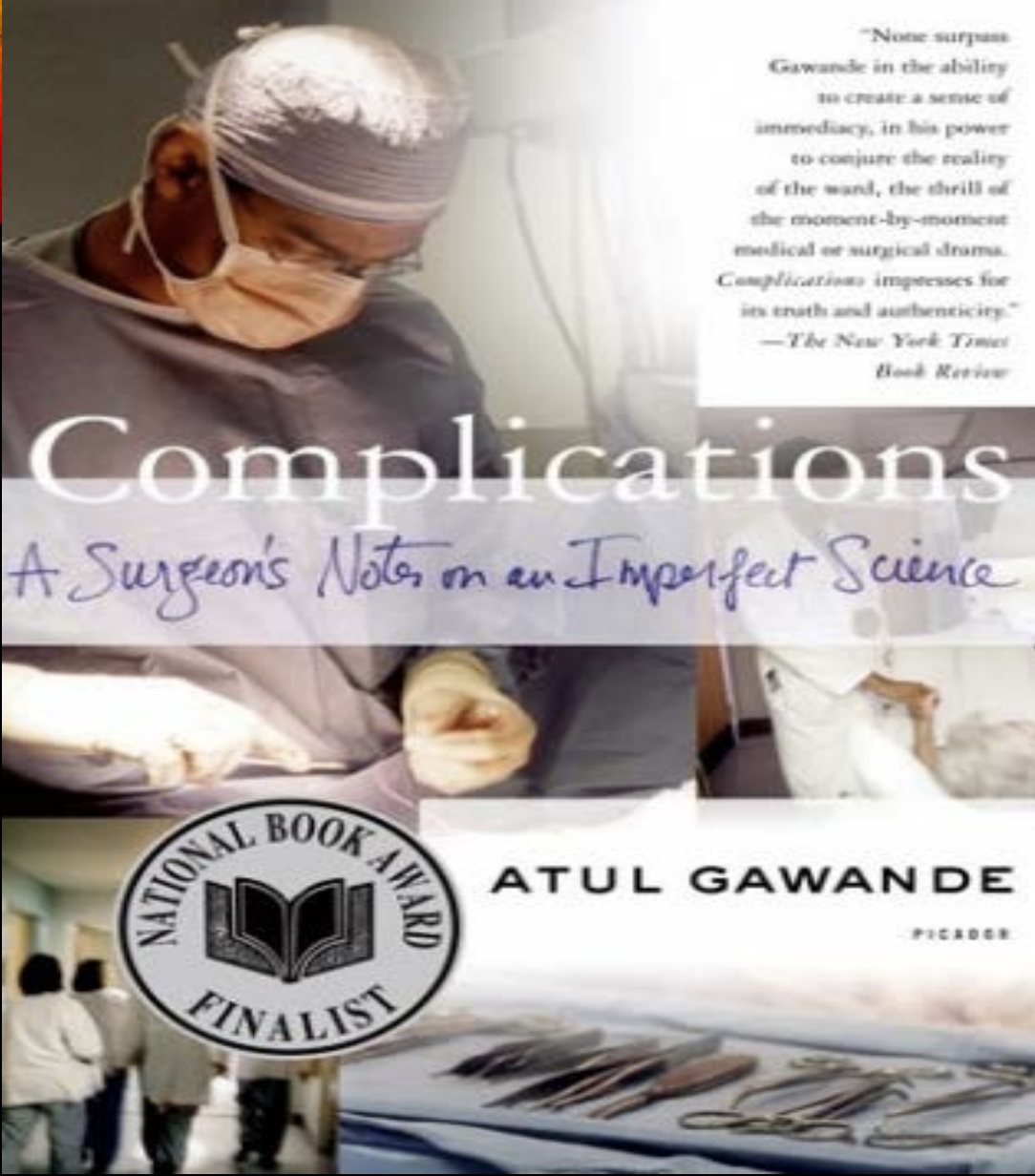
KEY FOR SUCCESS IS COLLABORATION



- Health care
- Industry
- Academy
- Patients

EQUIPOTENT RISK?





"None surpasses
Gawande in the ability
to create a sense of
immediacy, in his power
to conjure the reality
of the ward, the thrill of
the moment-by-moment
medical or surgical drama.
Complications impresses for
its truth and authenticity."
—*The New York Times*
Book Review

Complications

A Surgeon's Notes on an Imperfect Science

ATUL GAWANDE

PICADOR



"*Better* is a masterpiece, a series of stories set inside the four walls of a hospital that end up telling us something unforgettable about the world outside."

—MALCOLM GLADWELL, author of *BLINK*

Atul Gawande

AUTHOR OF *COMPLICATIONS*

BETTER

A SURGEON'S NOTES ON PERFORMANCE

PICADOR



TECH PUSH



"FBC pressure"

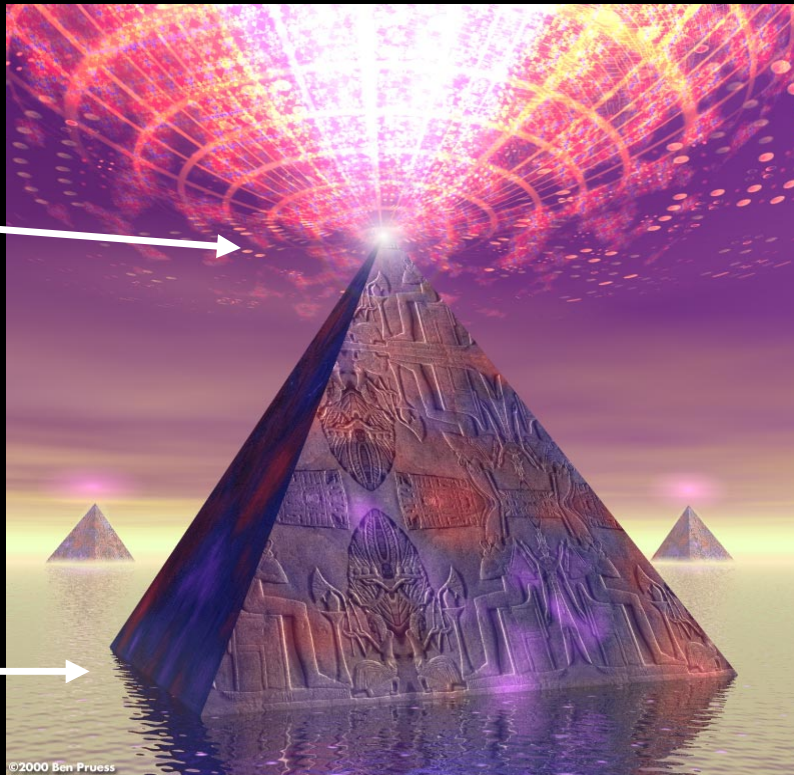
Faster Better Cheaper

THE SHARP AND BLUNT END OF SAFETY WORK IN HEALTH CARE

Clinical practice

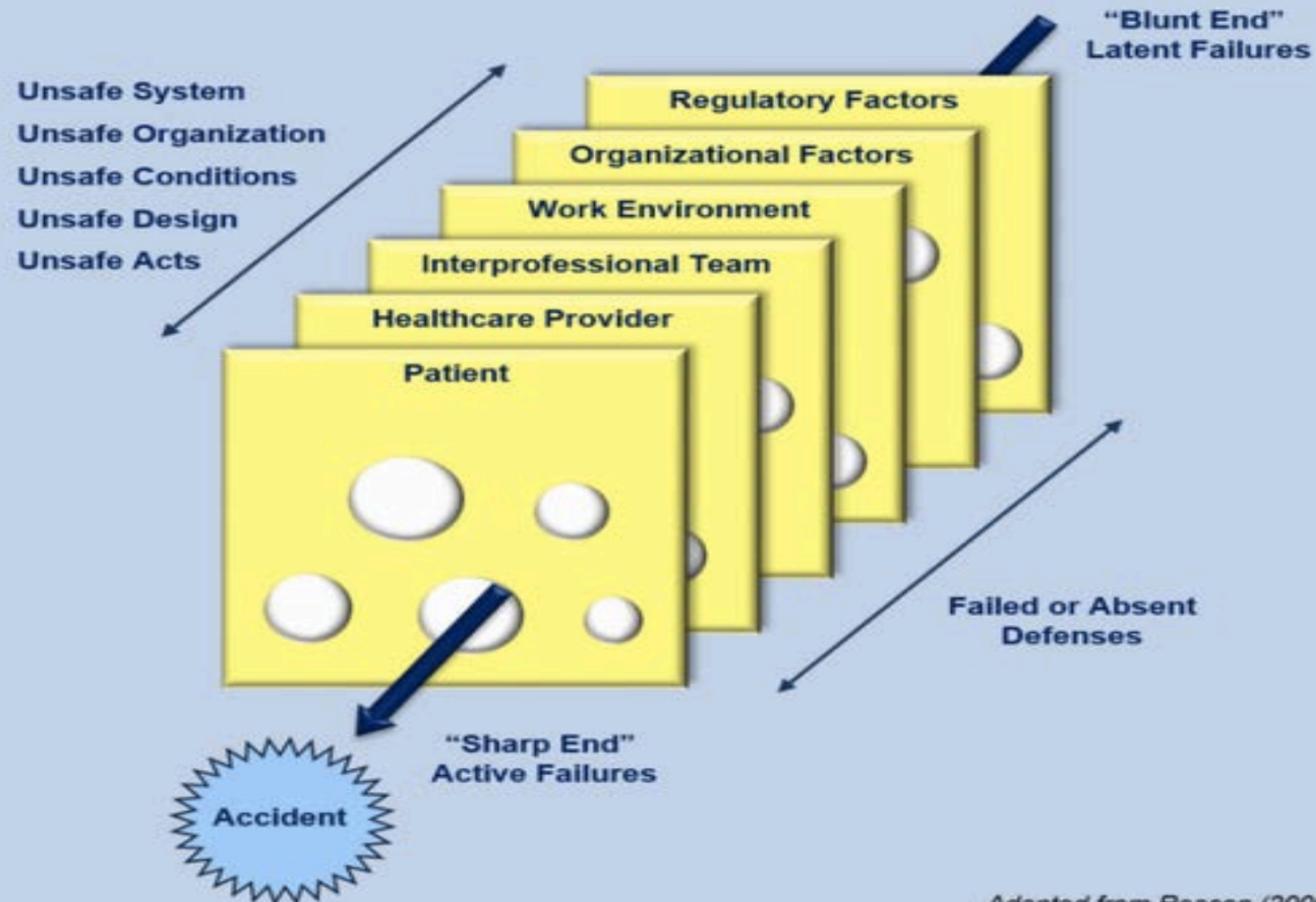


Legislation, policies





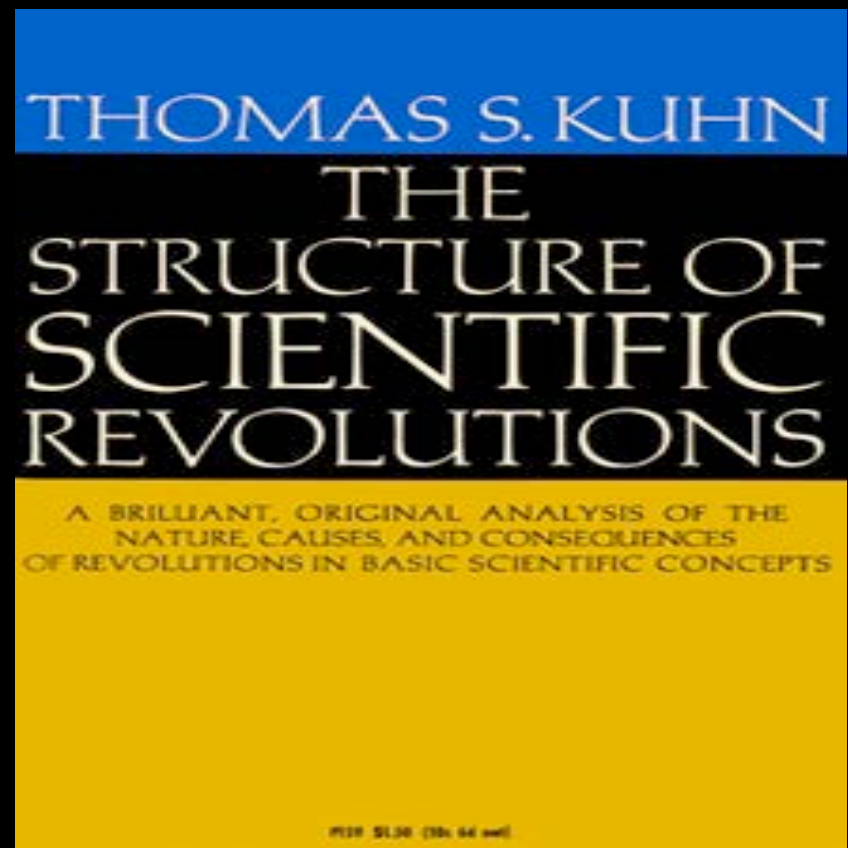
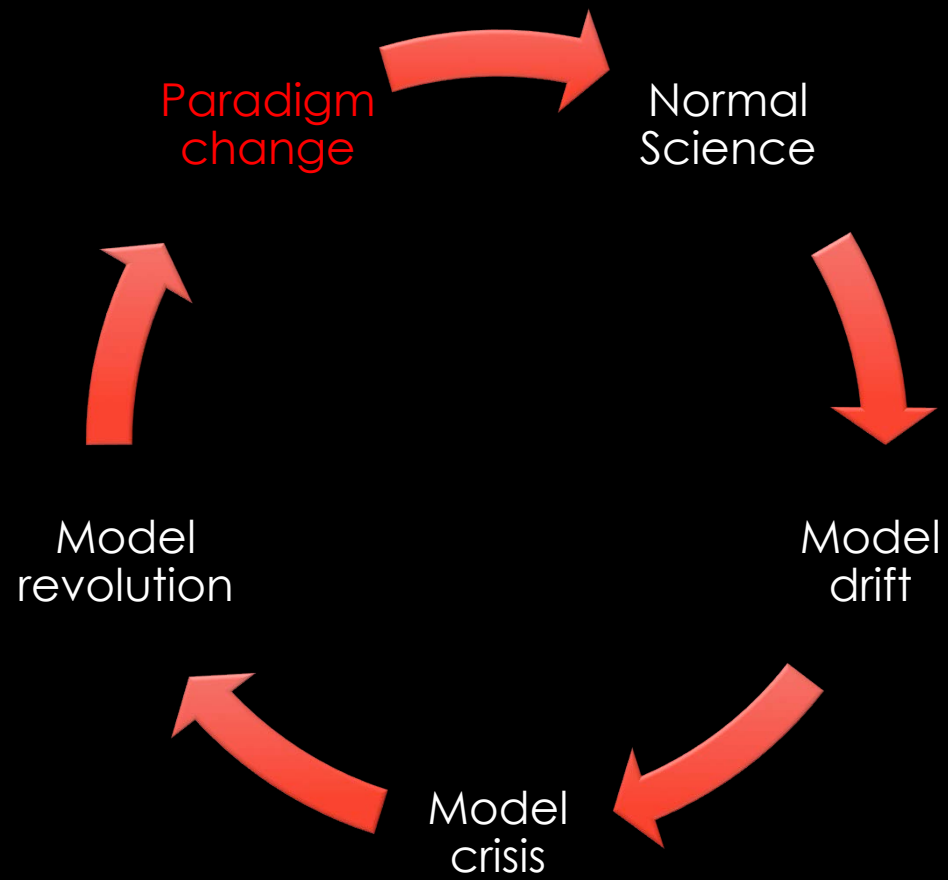
The Swiss Cheese Model



Adapted from Reason (2000)

EXAMPLES OF SURGEONS VIEWS ON PATIENT SAFETY AT THE SHARP END

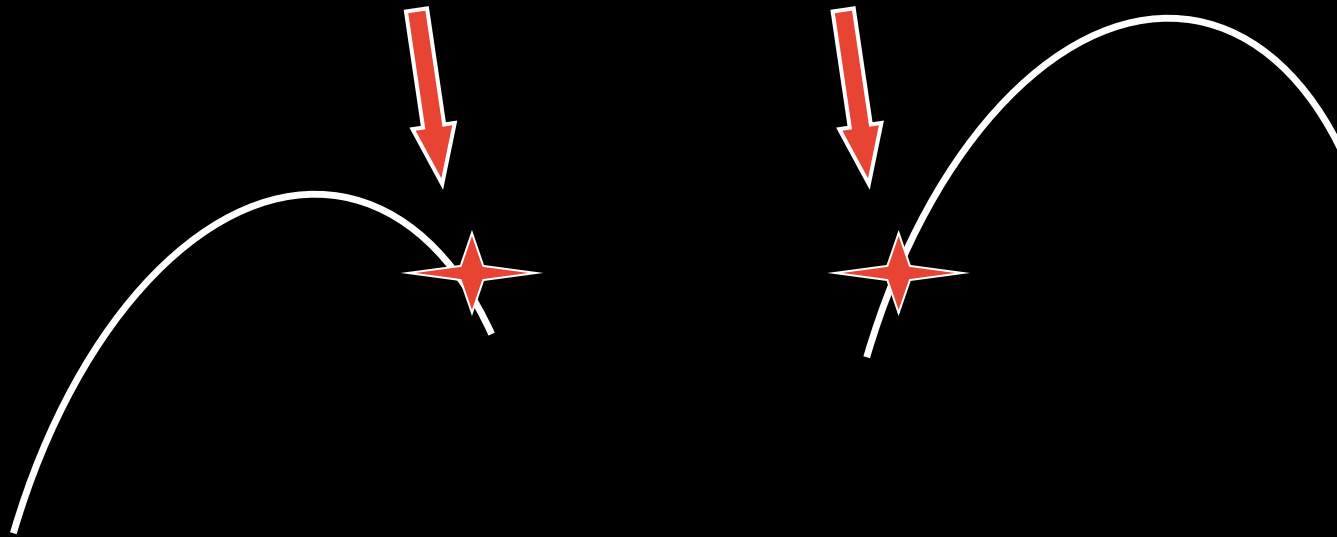
- Implant related factors
- Patient related factors
- Perioperative factors
- Surgeon related factors



The structure of scientific revolutions

Discouragement

Excitement



Science mostly works with a single paradigm driven by examples of successful work. Proposals for paradigm change are resisted.

Kuhn T, Structure of scientific revolutions

IMPLANT RELATED FACTORS

CT based analysis and follow up may enable a disruptive change in monitoring of implant motion and loosening

A new approach to stepwise introduction and quality control of new implants

Cemented loose cup plain film and dynamic CT



Courtesy Prof em Lars Weidenhielms Research Group, Karolinska Institutet



Subtle movement of cup 0,3 mm

Courtesy Prof em Lars Weidenhielms Research Group, Karolinska Institutet



PLIF and lumbar cage with pseudarthrosis

Courtesy Prof em Lars Weidenhielms Research Group, Karolinska Institutet

PATIENT RELATED FACTORS

Perioperative smoking cessation

Perioperative alcohol cessation




PERIOPERATIVE SMOKING CESSATION CAN REDUCE COMPLICATIONS

**ANNALS OF
SURGERY**

A MONTHLY REVIEW OF SURGICAL SCIENCE SINCE 1885

RANDOMIZED CONTROLLED TRIALS

Effects of a Perioperative Smoking Cessation Intervention on Postoperative Complications: A Randomized Trial

Lindström, David MD, PhD^{*}; Azodi, Omid Sadr MD[†]; Wladis, Andreas MD, PhD^{*}; Tønnesen, Hanne MD, DrMSc[‡]; Linder, Stefan MD, PhD^{*}; Nåsell, Hans MD[§]; Ponzer, Sari MD, PhD[§]; Adami, Johanna MD, PhD, MPH[†] [Author Information](#) 

Annals of Surgery: November 2008 - Volume 248 - Issue 5 - p 739-745

doi: 10.1097/SLA.0b013e3181889d0d

PERIOPERATIVE ALCOHOL CESSATION CAN REDUCE COMPLICATIONS



**Cochrane
Library**

The Cochrane Database of Systematic Reviews

[Cochrane Database Syst Rev](#). 2018 Nov; 2018(11): CD008343.

PMCID: PMC6517044

Published online 2018 Nov 8.

PMID: [30408162](#)

doi: [10.1002/14651858.CD008343.pub3](#)

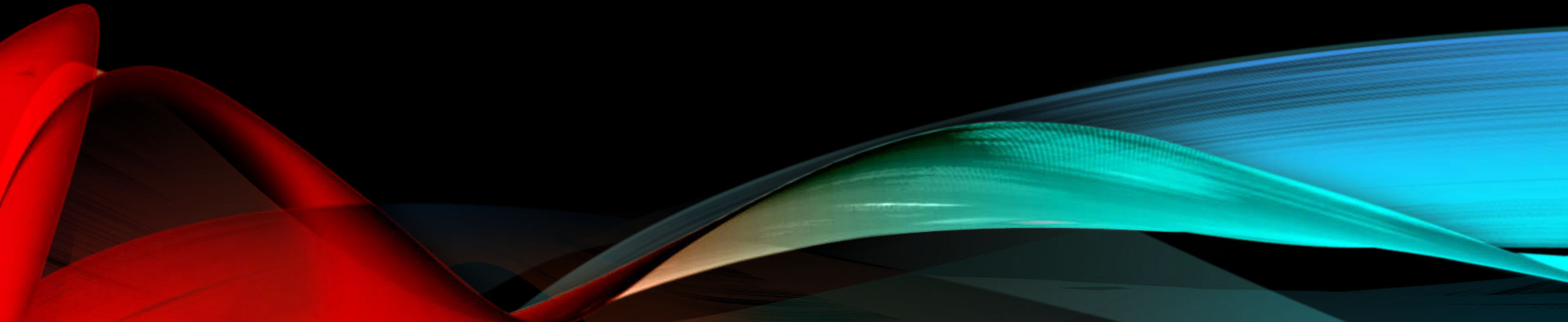
Perioperative alcohol cessation intervention for postoperative complications

[Julie WM Egholm](#),  [Bolette Pedersen](#), [Ann Merete Møller](#), [Johanna Adami](#), [Carsten B Juhl](#), and [Hanne Tønnesen](#)

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PERIOPERATIVE FACTORS

Rapid recovery protocols



RAPID RECOVERY PROTOCOLS

- SURGEON INVOLVEMENT IMPORTANT

Combating:

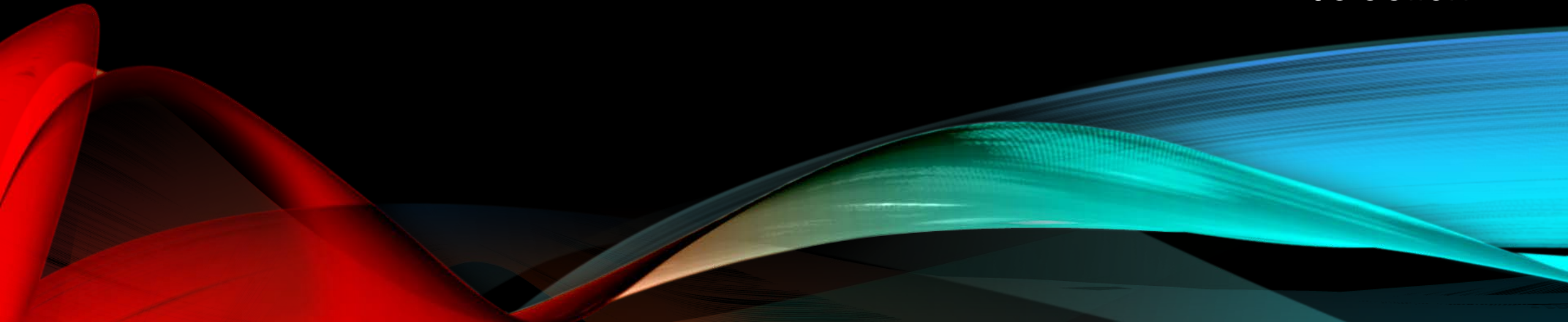
- thromboembolic complications
- cardiopulmonary complications
- delirium
- early organ dysfunctions
 - pain,
 - nausea and vomiting,
 - fatigue, weakness, and dizziness

Potential pitfalls:

- Frail patients
- Unintended consequence on prosthetic fixation?

SURGEON RELATED FACTORS

Both technical and non-technical abilities are important
Selection



THE ABILITY TO INTERPRET REGISTRY DATA AND SCIENTIFIC REPORTS



"Meaningless statistics were up one-point-five per cent this month over last month."



Clin Orthop Relat Res (2015) 473:1582–1589
DOI 10.1007/s11999-014-3966-2

**Clinical Orthopaedics
and Related Research®**
A Publication of The Association of Bone and Joint Surgeons®

**SYMPOSIUM: PATIENT SAFETY: COLLABORATION, COMMUNICATION, AND PHYSICIAN
LEADERSHIP**

How Prevalent Are Hazardous Attitudes Among Orthopaedic Surgeons?

**Wendy E. Bruinsma MD, Stéphanie J. E. Becker MD,
Thierry G. Guitton MD, PhD, John Kadzielski MD,
David Ring MD, PhD**

Published online: 2 October 2014

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Acta Orthop. 2017 Oct;88(5):466-471. doi: 10.1080/17453674.2017.1298353. Epub 2017 Mar 15.

Risk preferences and attitudes to surgery in decision making.

Meunier A¹, Posadzy K², Tinghög G^{2,3}, Aspenberg P¹.

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- 2 b Department of Management and Engineering, Division of Economics , Linköping University.
- 3 c The National Center for Priority Setting in Health Care, Department of Medical and Health Sciences , Linköping University , Linköping , Sweden.

ORIGINAL REPORTS

Identification of Warning Signs During Selection of Surgical Trainees



Kristine Hagelsteen, MD, PhD,^{,†} Britt-Marie Johansson, PhD,[‡] Anders Bergenfelz, MD, PhD,^{*,†} and Chris Mathieu, PhD[‡]*

^{*}Department of Clinical Sciences and Surgery, Lund University, Skåne University Hospital, Lund, Sweden; [†]Practicum Clinical Skills Centers, Skåne University Hospital, Lund, Sweden; and [‡]Department of Sociology, Lund University, Lund, Sweden

SURGEONS WILL NEED TO TRAIN BOTH TECHNICAL AND NON- TECHNICAL SKILLS

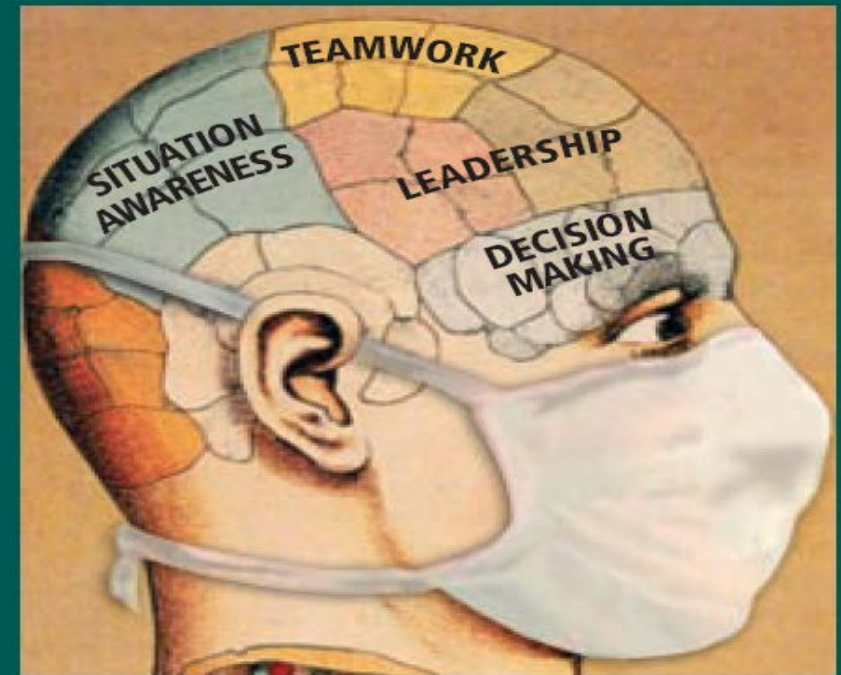


NON-TECHNICAL SKILLS FOR SUREGONS (NOTSS)

R FLIN ET AL UNIV ABERDEEN, R COLL SURG ED

Human factors in surgery

- **Situation awareness**
- **Decision making**
- **Communication**
- **Teamwork**
- **Leadership**



Safer Surgery

Analysing Behaviour in the Operating Theatre
Rhona Flin and Lucy Mitchell

- Presents the latest research on the behaviour of operating theatre teams
- Describes the techniques used by psychologists and clinicians to study the task performance of surgeons, anaesthetists and theatre nurses.
- Outlines the safety implications of research to date



SURGEON SUMMARY

360° APPROACH TO PATIENT SAFETY

- The right operation
- With the right implant
- For the right patient
 - At the right time
 - In the right place
- With the right surgeon
 - With the right team
- With the right preparation
- With the right medication
- With the right rehabilitation



*Experience is the name everyone
gives to their mistakes*

Oscar Wilde