

#hverdagsrevolution

#testhverdagen



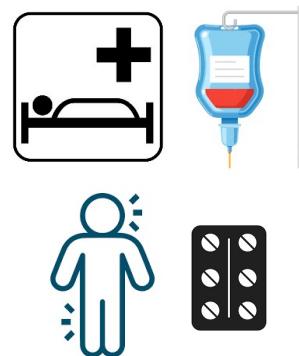
COIs

**Forskningsmidler fra Novo Nordisk Fonden
Sygeforsikringen ‘danmark’
Pfizer**

Diskussionspunkter...

- Den perfekte storm
- Gør det rigtige – JA – men...
 - 20-30 %'s spild
 - Usikkerhed om værdien af mange behandlinger
 - Store dele af væsnet får svært ved at forbedre sig selv
- Hverdagen på ITA – Covid viste en vej
- Det er op til os – heldigvis – #hverdagsrevolution





Min hverdag

- Implementeret uden kliniske forsøg
- 10 % af behandlinger baseret på god evidens
- 20-30 %'s spild, skade - direkte og indirekte
- Mange *medicinske vendinger*
- Ulighed i F&U





**Behandlinger i kliniske retningslinjer hvor vi
har høj tiltro til evidensen...**

Behandlinger i kliniske retningslinjer hvor vi har **høj tiltro til evidensen...**



GRADE

» **Høj tiltro til evidensen:** Vi er meget sikre på, at den sande effekt ligger tæt på den estimerede effekt'

Behandlinger i kliniske retningslinjer hvor vi har **høj tiltro til evidensen...**

- Kardiologi 15%

JAMA 2019;321:1069-80

- Intensiv medicin 10%

ICM 2018; 44:1189–91

- Sepsis 7%

ICM 2021; 47:1181-1247

- Onkologi 6%

JCO 2011; 29:186–91

Behandlinger i kliniske retningslinjer hvor vi har **høj tiltro til evidensen...**

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- Intensiv medicin 10% ICM 2018; 44:1189–91
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- Onkologi 6% JCO 2011; 29:186–91

Kerne anbefalinger i septisk shock

- **Initial resuscitation** 5
- **Antibiotika** 18
- **Fokus kontrol** 2
- **Væske** 6
- **Vasoaktive midler** 10
- **Transfusion** 1

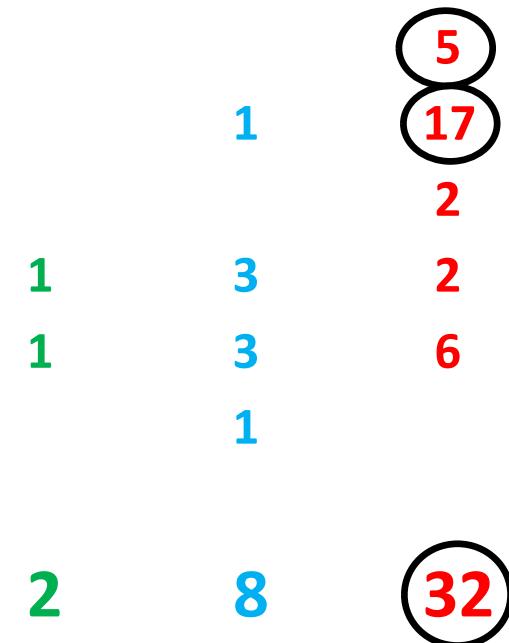
Total 42

Kerne anbefalinger i septisk shock

| | |
|-------------------------|-----------|
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| • Antibiotika | 18 |
| • Fokus kontrol | 2 |
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| • Vasoaktive midler | 10 |
| • Transfusion | 1 |
| Total | 42 |

Tiltro til evidensen

Høj - **Moderat** - **Lav/meget lav**



Tiltro til evidensen

» **Lav tiltro:** Vi har begrænset
tiltro til den estimerede effekt.
Den sande effekt kan være
væsentligt anderledes end den
estimerede effekt'

Tiltro til evidensen

» **Lav tiltro:** Vi har begrænset tiltro til den estimerede effekt. Den sande effekt kan være væsentligt anderledes end den estimerede effekt'

» **Meget lav tiltro:** Vi har meget ringe tiltro til den estimerede effekt. Den sande effekt vil sandsynligvis være væsentligt anderledes end den estimerede effekt'

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Medicinske vendinger i intensiv medicin

Skade

- Hydroxyethyl starch*
- HFO ventilation*
- Intensive insulin*
- Oral chlorhexidine*
- Dopamine in septic shock*
- Steroids in traumatic brain injury*
- Cooling in traumatic brain injury*
- Albumin in traumatic brain injury*
- High dose steroid in septic shock*
- High tidal volume ventilation*
- Supra-normal oxygen delivery*
- IV fluid boluses in kids with sepsis in LMIC*
- Glutamine for severe critical illness*
- Liberal transfusion in GI bleeding*
- Cytokine absorption in critically ill*
- PIP/Tazo for ESBL infections*
- Inhaled nitric oxide in ARDS
- Early parenteral nutrition
- Early enteral nutrition in shock
- PCT-guided Ab-escalation
- Early revasculisation in OHCA
- Decompressive craniectomy in TBI
- Tranexamic acid for severe GI bleeding
- Levosimendan in sepsis
- Vitamin C in sepsis
- Early tracheotomy
- Early dialysis
- Albumin in cardiac surgery

Spild

- Vitamin D
- Early goal-directed therapy
- Albumin for resuscitation
- Albumin substitution
- High-dose dialysis
- Activated protein C
- Liberal blood transfusion in sepsis
- Intra-aortic balloon pump
- Levosimendan in cardiac surgery
- Liberal transfusion in cardiac surgery
- Hypothermia to 33°C in OHCA
- Pantoprazole prophylaxis
- Immunonutrition
- Mechanical DVT prophylaxis
- NMBA in ARDS
- Liberal oxygen therapy
- IVIG for NSTI
- Liberal IV fluid therapy in sepsis
- Early goal-directed nutrition
- ‘Renal dose’ dopamine
- Probiotics
- Routine BAL for nosocomial pneumonia
- Liberal blood transfusion in kids
- Early parenteral nutrition in kids
- Pulmonary artery catheter
- Glutamine in burn injury
- Combination antibiotic therapy
- PCM for fever
- Liberal blood transfusion in myocardial infarction

*øget dødelighed

Medicinske vendinger i intensiv medicin

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- **Hydroxyethyl starch***
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- **Glutamine for severe critical illness***
- **Liberal transfusion in GI bleeding***
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- **Early parenteral nutrition**
- **Early enteral nutrition in shock**
- **PCT-guided Ab-escalation**
- **Early revasculisation in OHCA**
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- **Tranexamic acid for severe GI bleeding**
- Levosimendan in sepsis
- Vitamin C in sepsis
- **Early tracheotomy**
- **Early dialysis**
- **Albumin in cardiac surgery**

Spild

- **Vitamin D**
- **Early goal-directed therapy**
- **Albumin for resuscitation**
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- **High-dose dialysis**
- **Activated protein C**
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- **Glutamine in burn injury**
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- **PCM for fever**
- **Liberal blood transfusion in myocardial infarction**

*øget dødelighed



Lopinavir

Hydroxychloroquine

Anticoagulation

Oseltamivir

cCPAP

Steroids

Azithromycin

JAK-inhibitors

IVIG

HF-oxygen

?

Aciclovir

Ivermectin

IL-6 inhibitors

Anti-bacterial

Early intubation



» Any treatment given for coronavirus other than general supportive care ... should currently be as part of a trial...'

A handwritten signature in black ink, appearing to read 'Frank Atherton'.

Dr Frank Atherton
Chief Medical Officer for Wales

A handwritten signature in black ink, appearing to read 'Catherine Calderwood'.

Dr Catherine Calderwood
Chief Medical Officer for Scotland

Dr Michael McBride
Chief Medical Officer for Northern Ireland

A handwritten signature in black ink, appearing to read 'Chris Whitty'.

Professor Chris Whitty
Chief Medical Officer for England

A handwritten signature in black ink, appearing to read 'Stephen Powis'.

Professor Stephen Powis
National Medical Director
NHS England and NHS Improvement



- » Any treatment given for coronavirus other than general supportive care ... should currently be as part of a trial...'
- » ...there are trials in primary care, hospital settings and ICUs'

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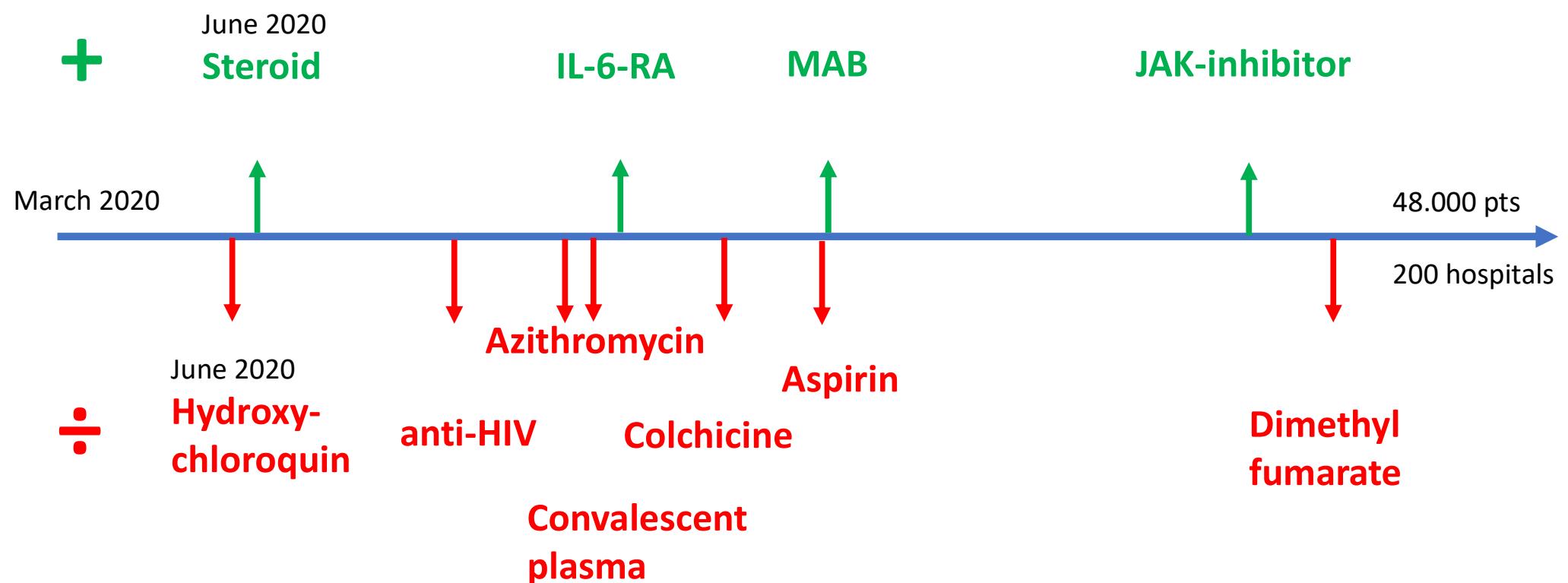
Professor Stephen Powis
National Medical Director
NHS England and NHS Improvement

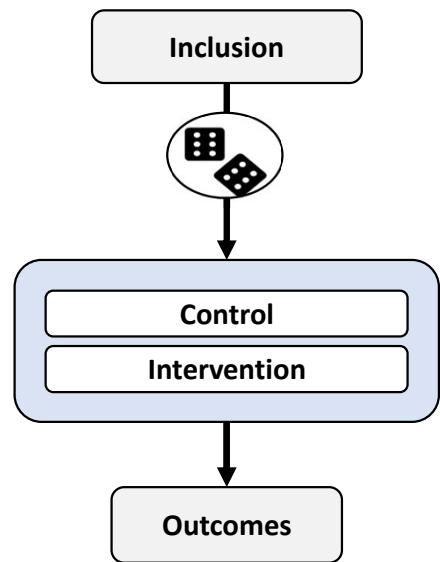
NHS platform trials for Covid-19



RECOVERY

Randomised Evaluation of COVID-19 Therapy





Medicinske vendinger i intensiv medicin

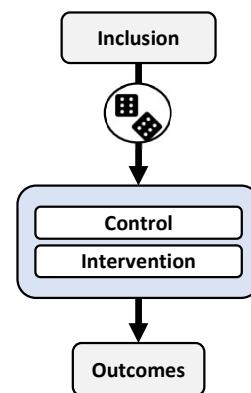
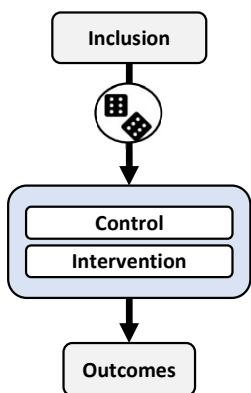
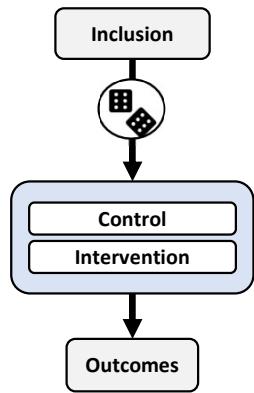
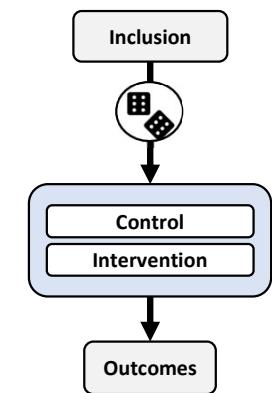
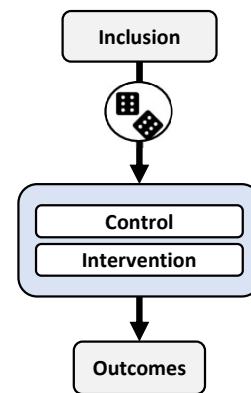
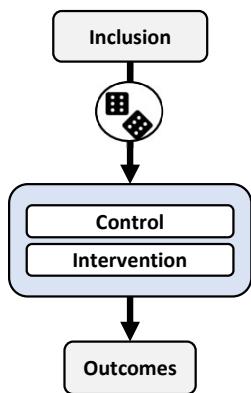
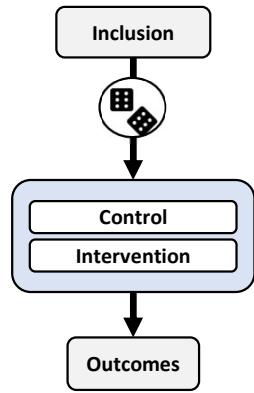
Skade

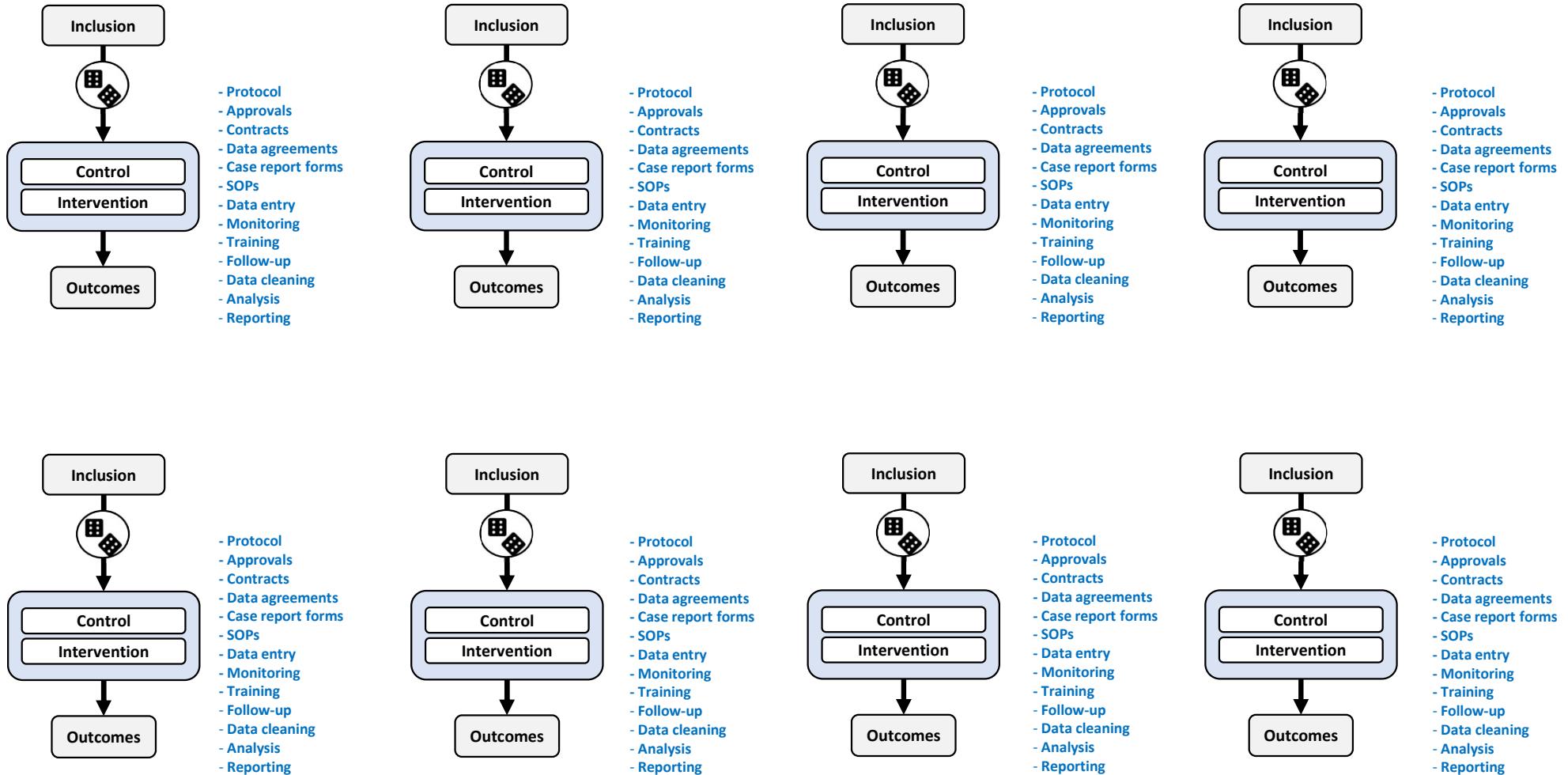
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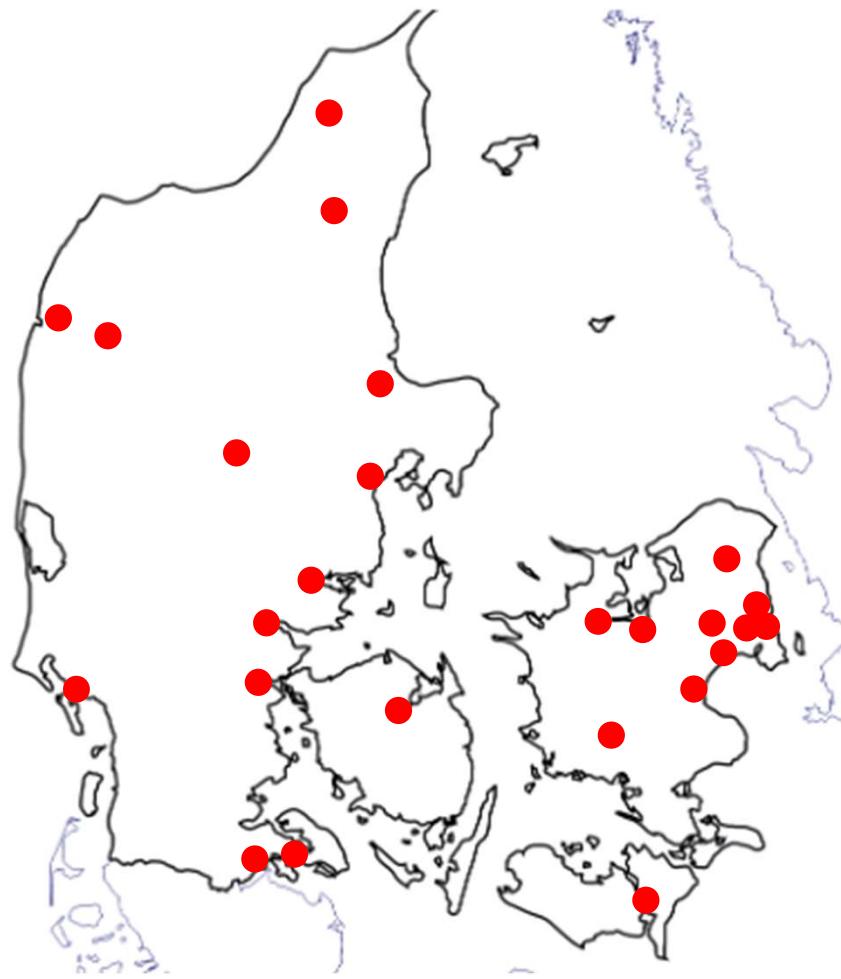
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*øget dødelighed









Meropenem vs. PIP/Tazo
til sepsis

Profylaktisk LMWH dosering

Spontant vs. kontrolleret
ventilation ved ARDS

Amiodaron vs. digitalis
vs. placebo til AFLI

Laktat- vs. Acetat-buffered væsker

Dexmedetomidin til delirprofylakse



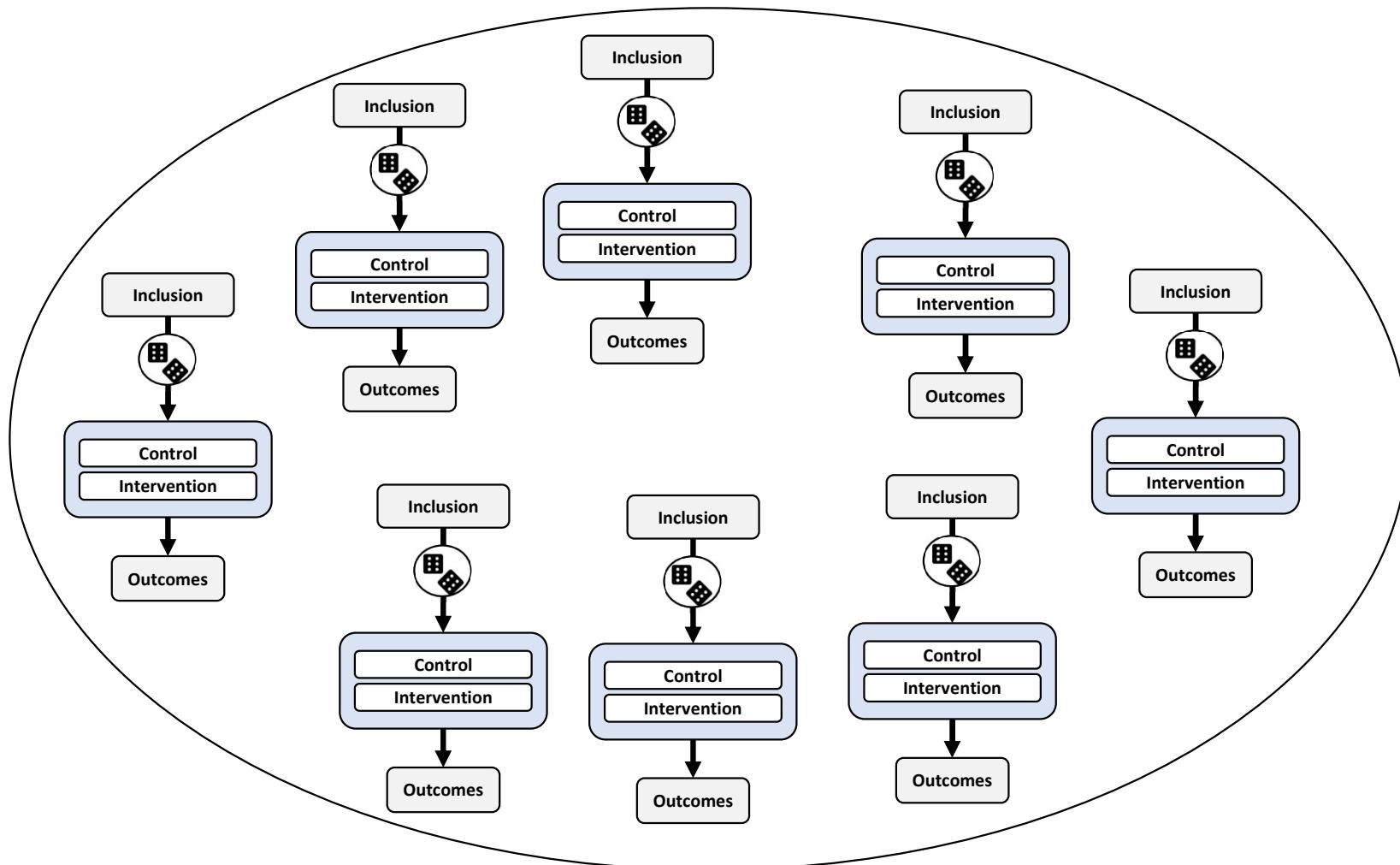
Albumin til shock

Drænage af pleuravæske

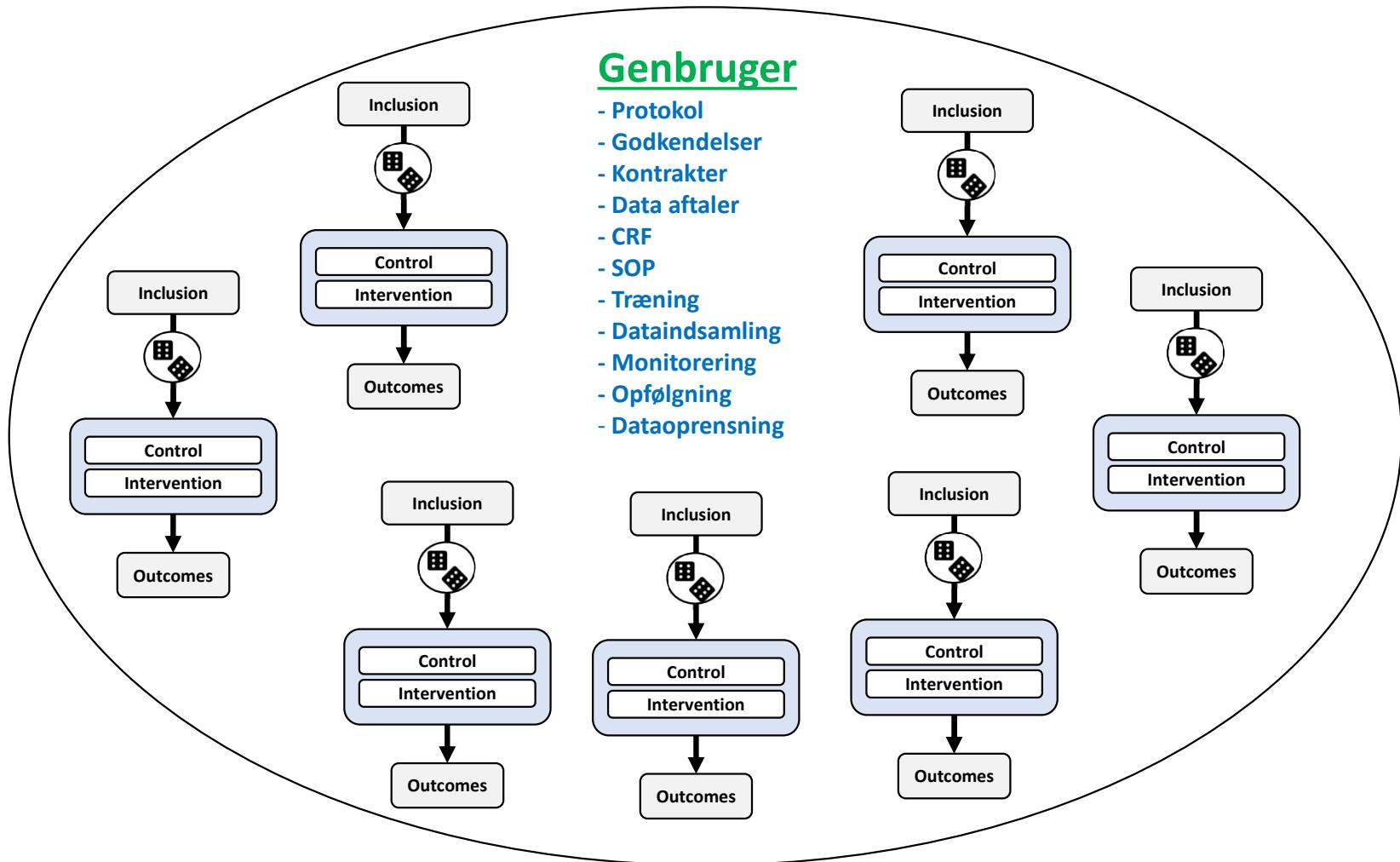
Restriktiv vs. liberal trombocyt-Tx

Rutine vs. indikationsblodprøver

Platformsforsøg



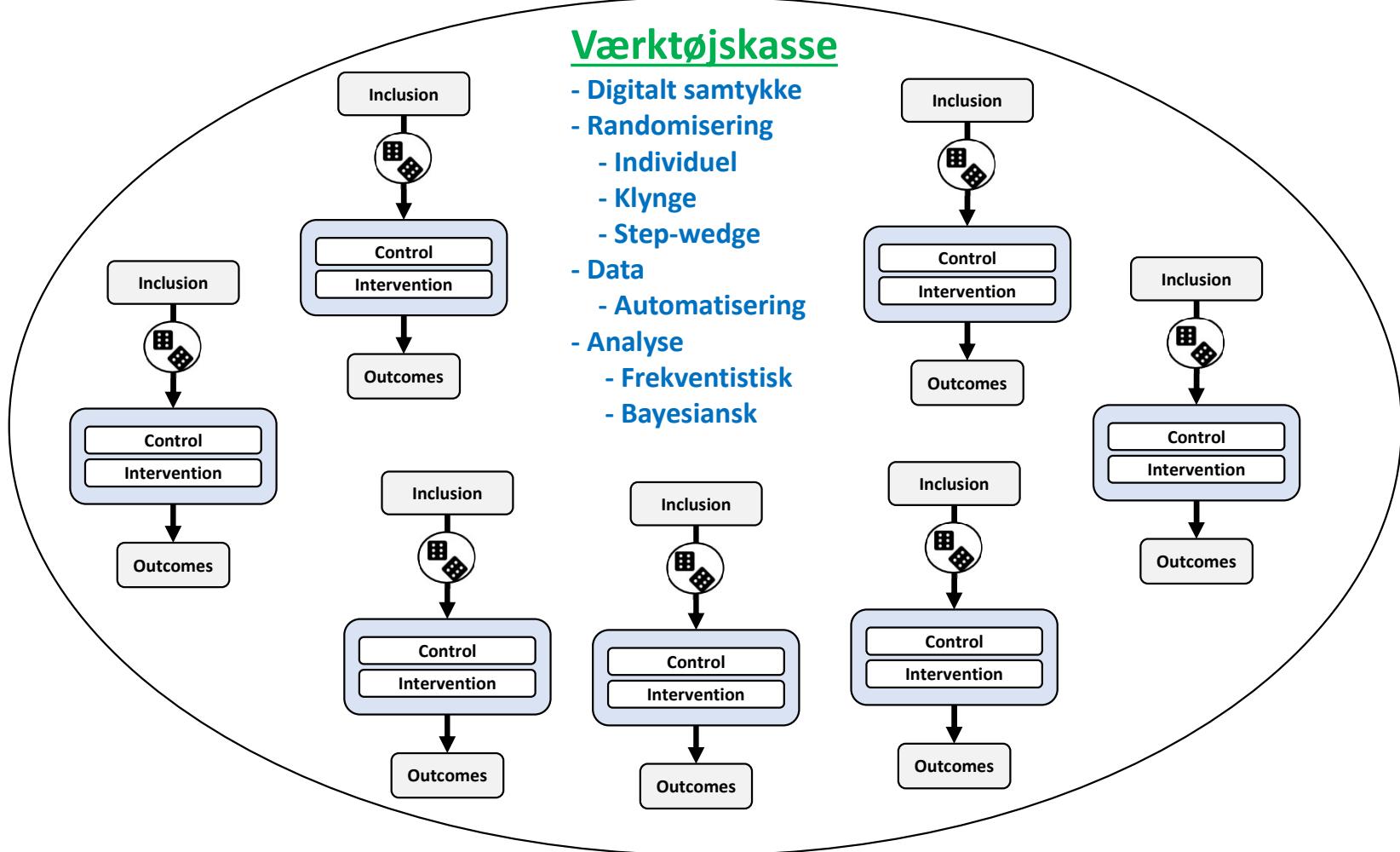
Platformsforsøg

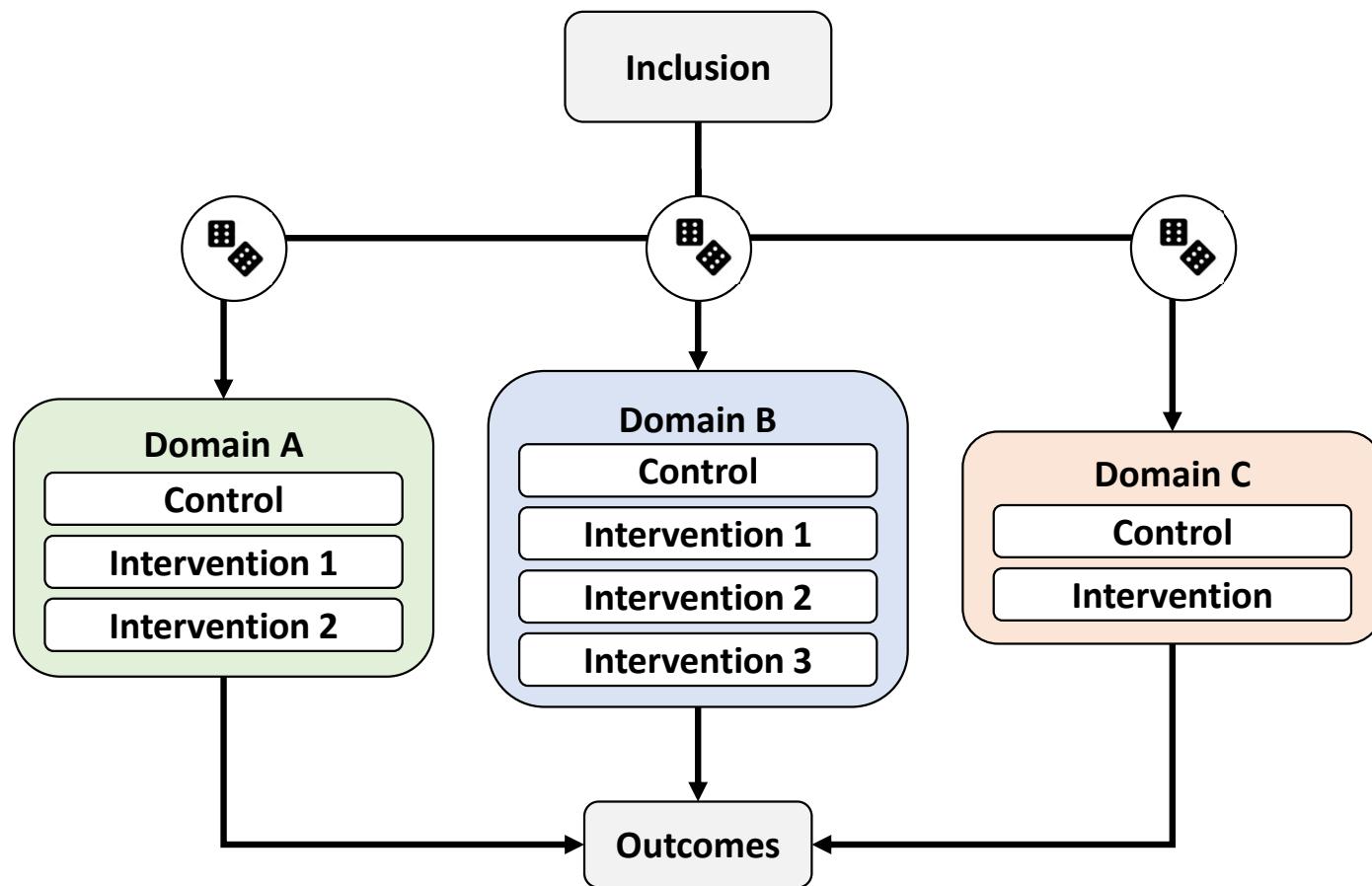


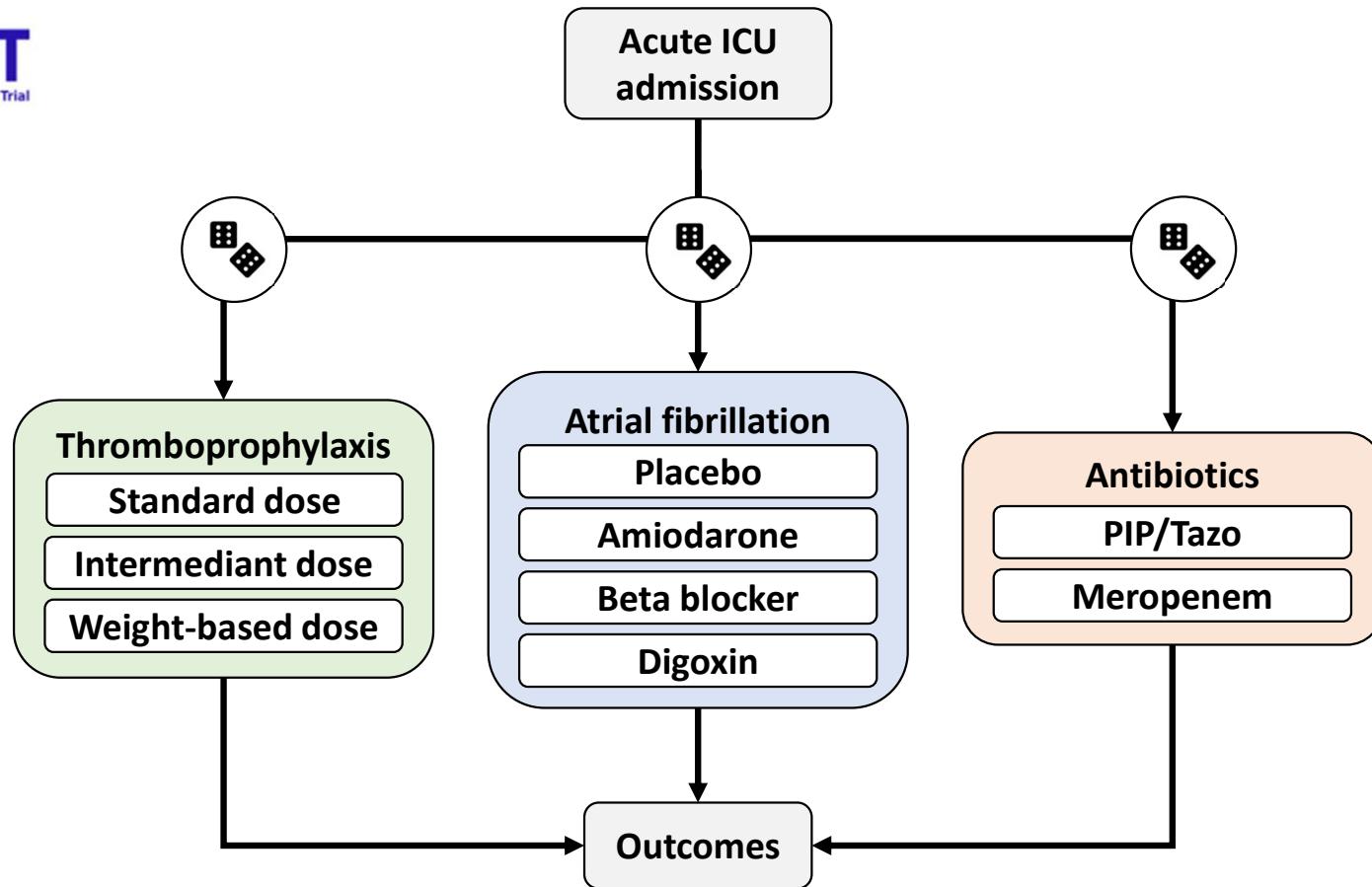
Platformsforsøg

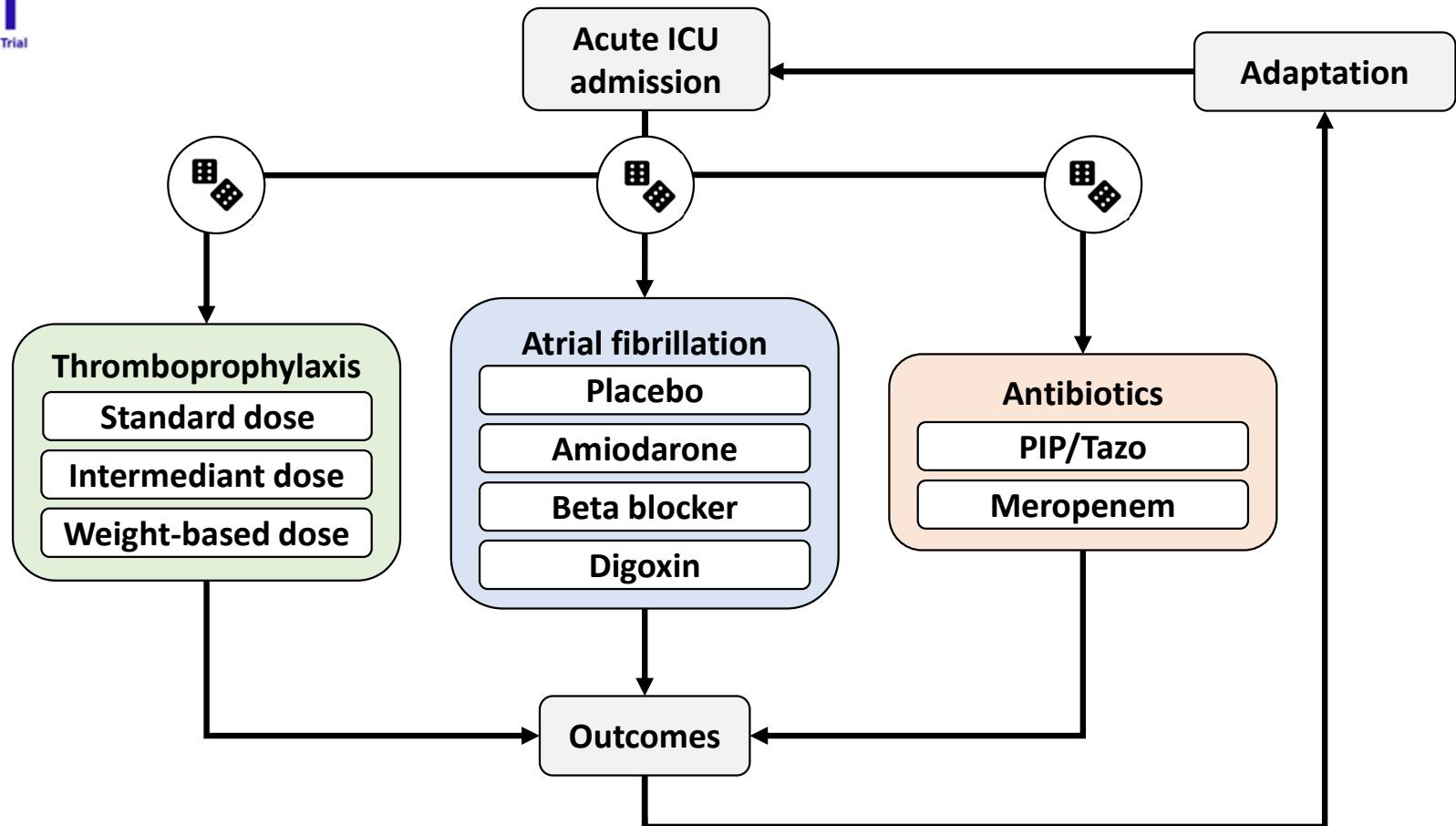
Værktøjskasse

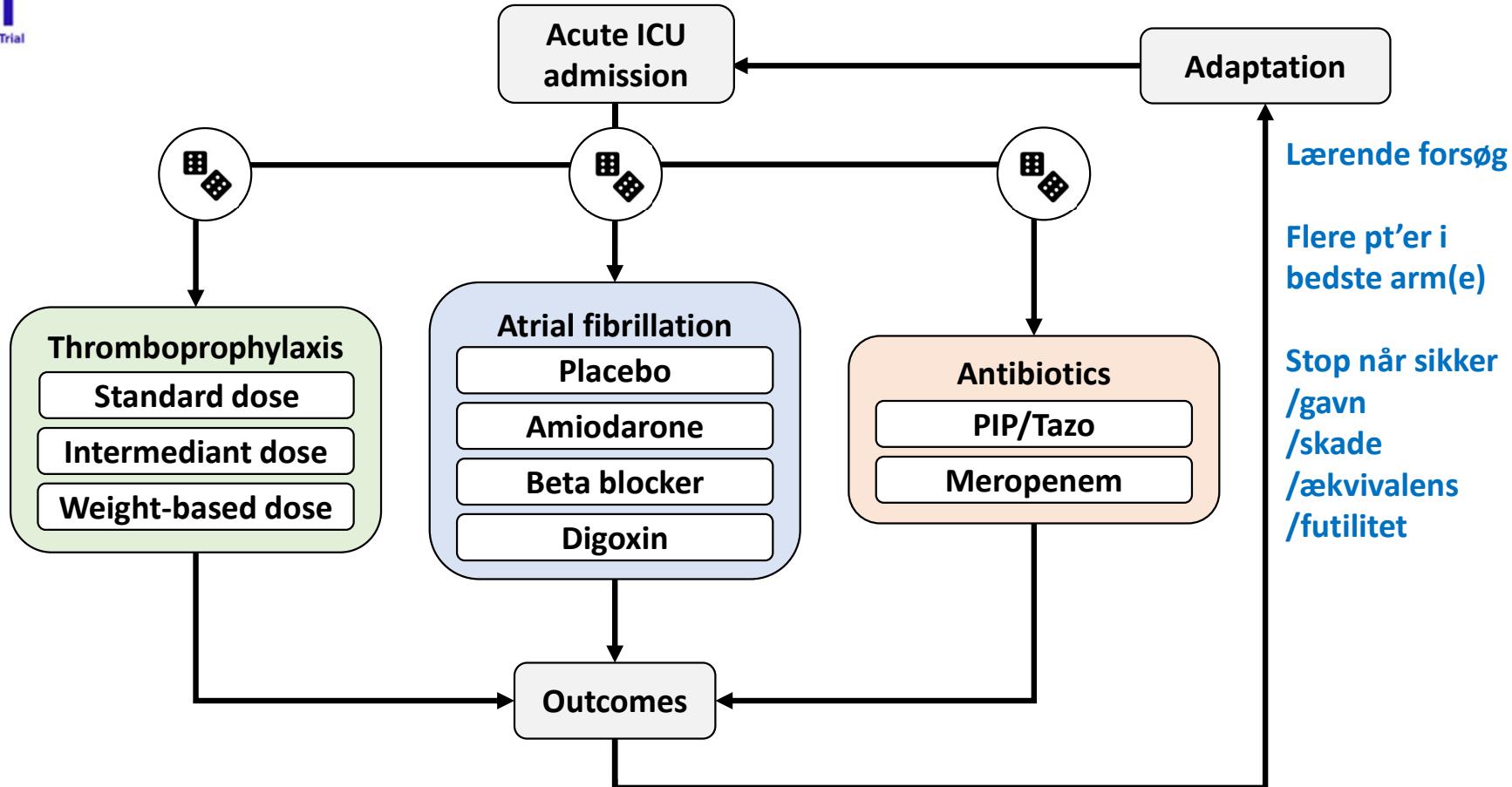
- Digitalt samtykke
- Randomisering
 - Individuel
 - Klynde
 - Step-wedge
- Data
 - Automatisering
- Analyse
 - Frekventistisk
 - Bayesiansk



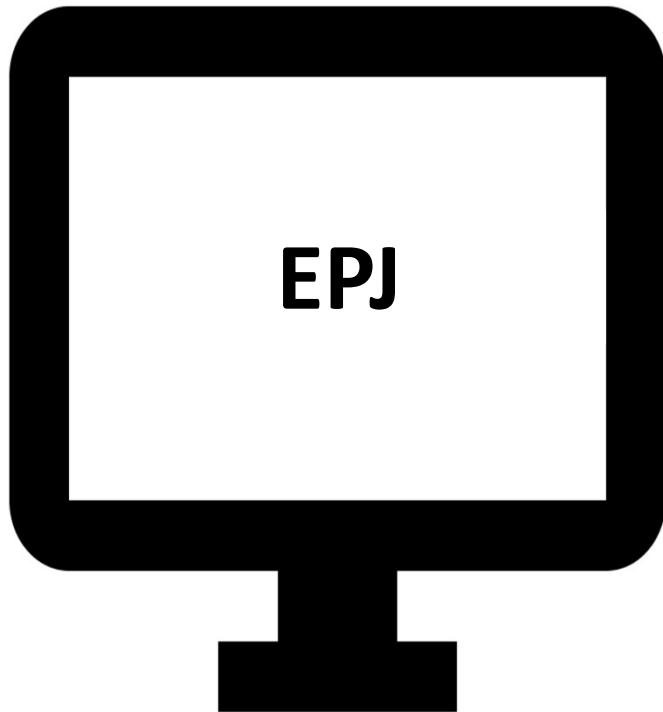




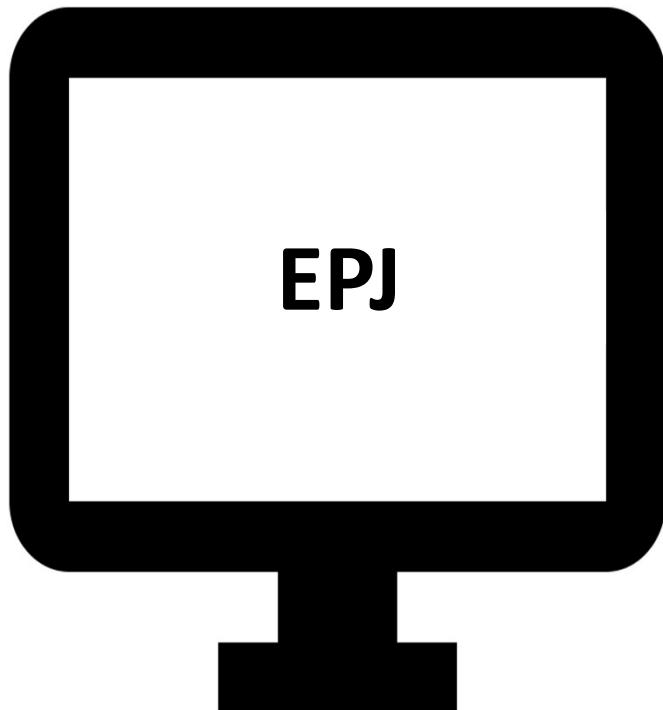




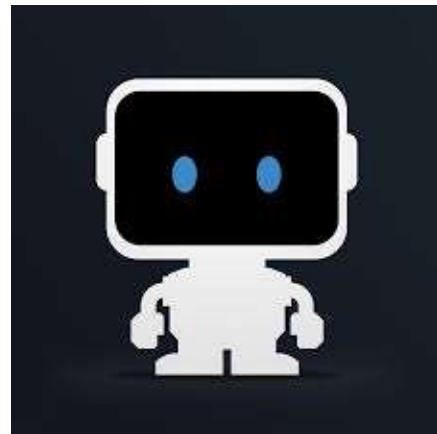
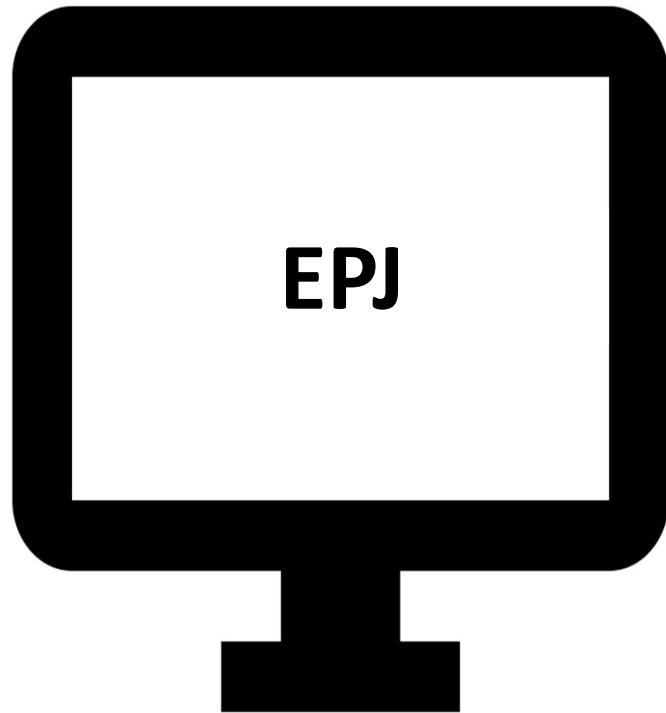
Data model



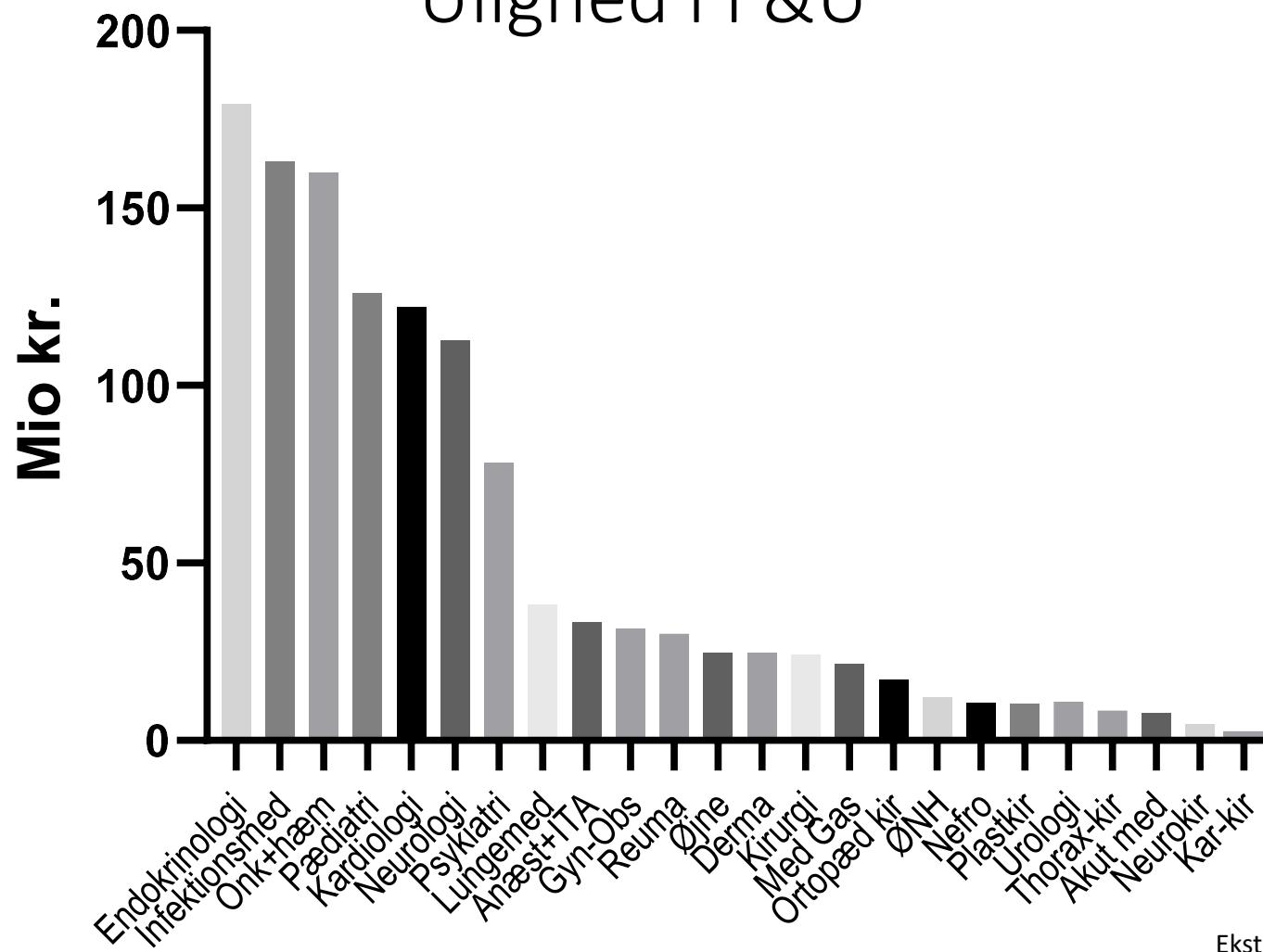
500 projektsygeplejersker taster data i klinisk forskning



Nationale, valide, tidstro data



Ulighed i F&U

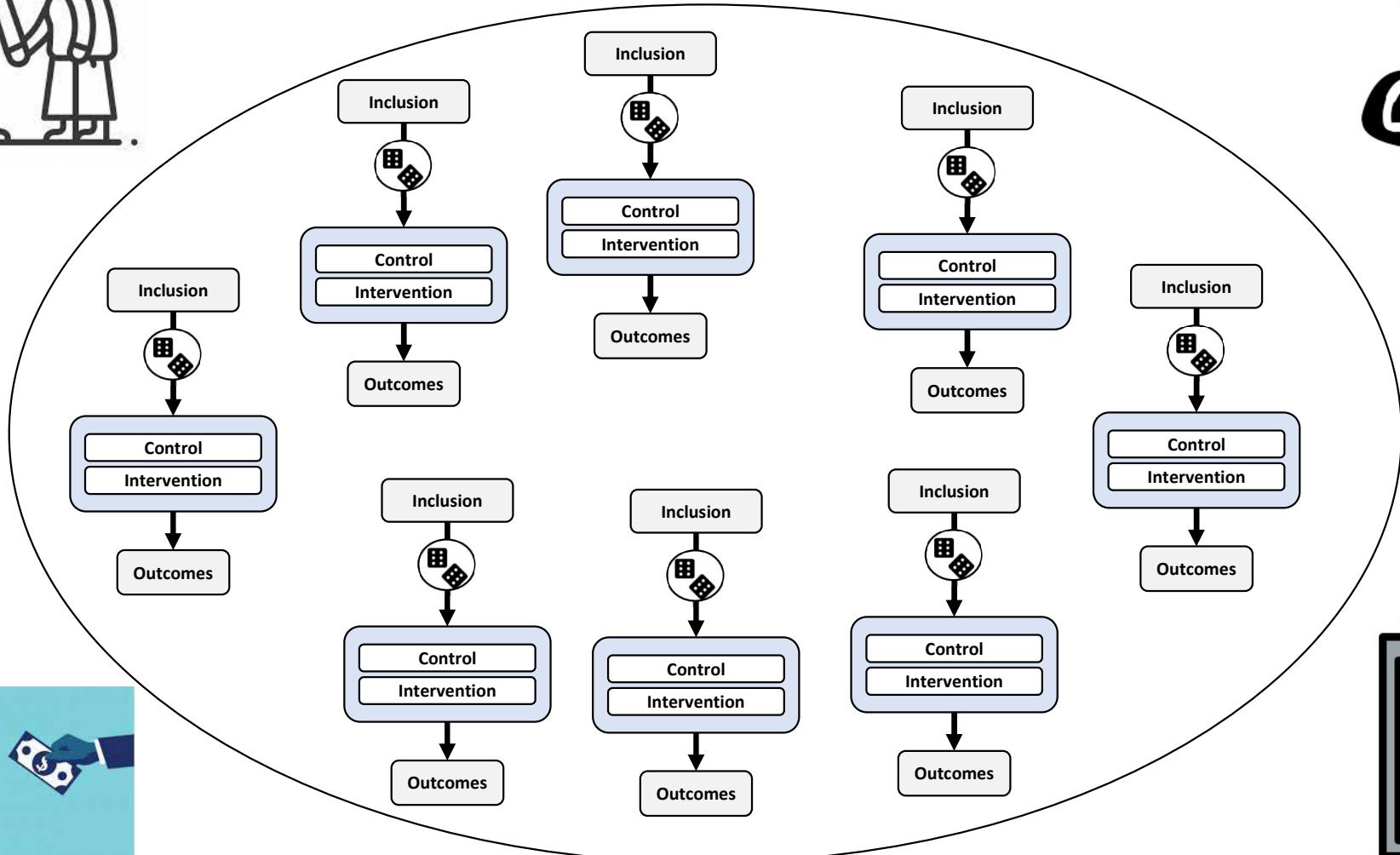


Eksterne midler Reg.H 2021





Platformsforsøg



#hverdagsrevolution

- Erkendelse
 - Spild, skade og ulighed – ondt vil blive værre
 - Det skal give værdi når vores fælles ressourcer anvendes
 - Store dele af sundhedsvæsnet kan ikke forbedre sig selv
- ‘Kontrakt’
 - Klinisk forskning med fokus på direkte værdi
 - Blivende, fælles, national testinfrastruktur tæt på klinikken – administrativ, metode, data & analyse
- Nedbryd siloer mellem drift, kvalitetssikring og forskning
- Fair samarbejde – patienter, klinikere, hospitalsejere, industri
- En realistisk vej til hurtig og fair forbedring af sundhedsvæsnet