



: interventions, please!

COGITATE intervention (CPPopt in TBI)

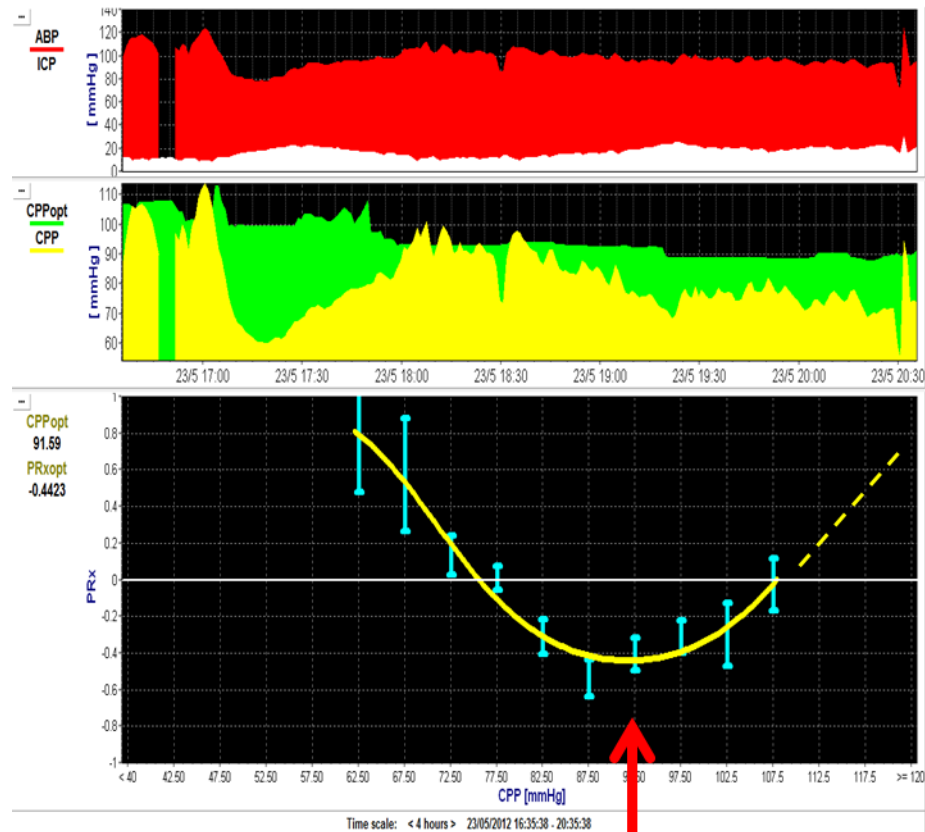
Marcel Aries

COGITATE investigators



# Disclosures

- None



CPPopt automated



# The 'ideal' world





# The 'ideal' neurocritical care unit

## Imaging



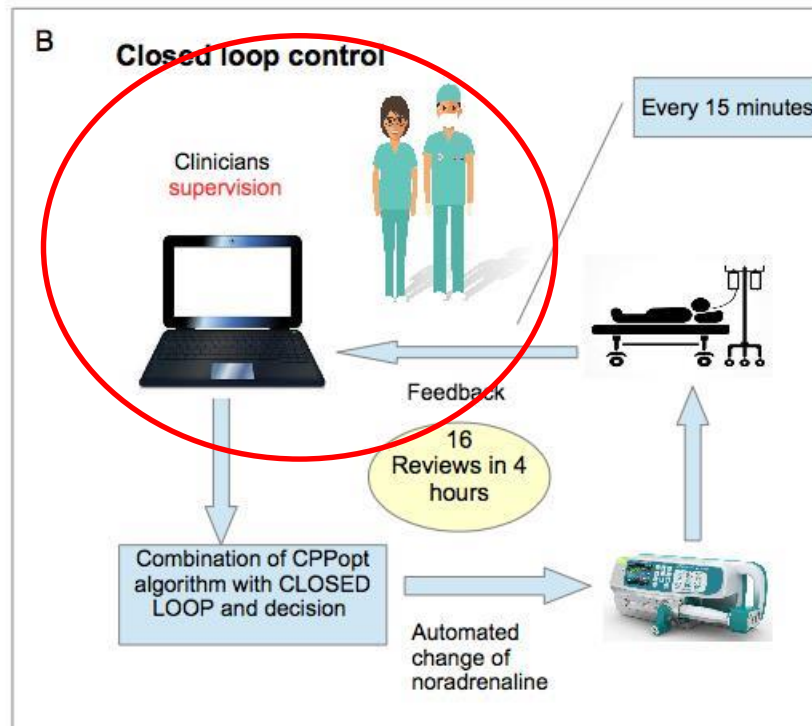
## Physiology





# Still dreaming....

## Early 2019



## 2022

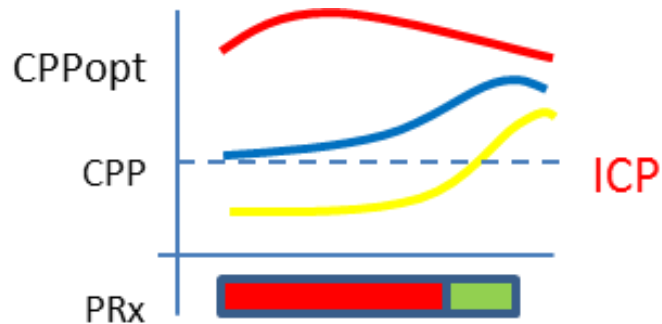
- ICP/CPP monitoring....
- Robust research evidence
  - PHASE II
  - PHASE III
- Automated models
  - Target calculations
  - Continuous targets
  - Continuous adjustments
- Money
- ‘CPPopt workshop’

Thanks to AnnaLisa Liberti



# Autoregulation guided interventions (2017)

## Model



'Software'

## Management



or



Interaction  
Reviews

'Human'



# Feasibility study (2018)

## COGITATE

## Interaction (aim)

Third Patient Enrolled in Multi-Center CPPopt Feasibility Study!

[www.cppopt.org](http://www.cppopt.org)



Enrolled by dr. Ari Ercole  
(Cambridge, United Kingdom)



Participating centers

Maastricht (NL)

Cambridge (UK)

Leuven (BE)







# 2018...pressure on



## Part of bedside management!!



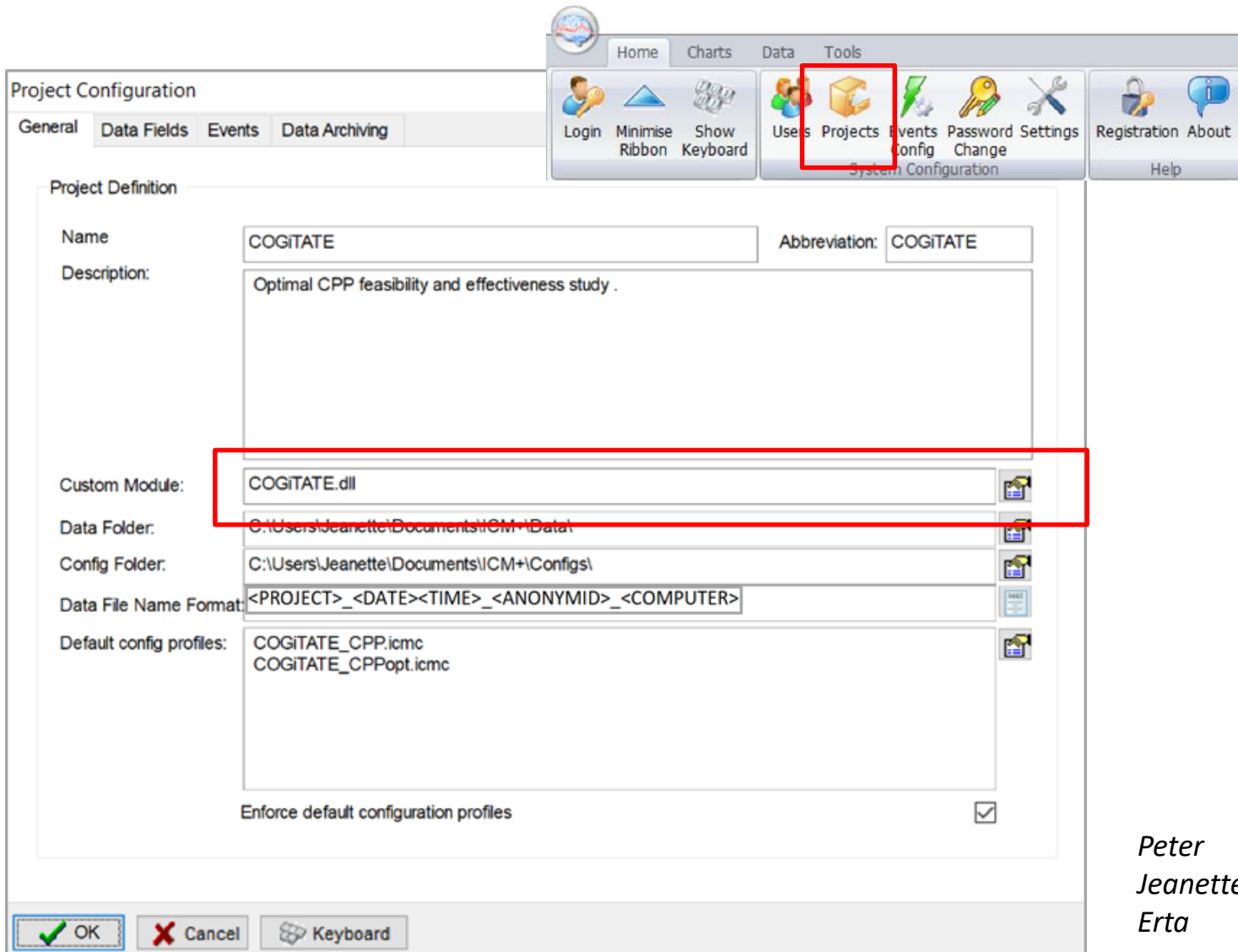
## Practical issues

- What to present?
- Randomisation option
- Alerts?
- Safety limits?
- Disconnections?
- Adding other monitoring
- Different centres
  - Different set-ups
  - Different computers (‘,’ or ‘.’)
- Switch obs → intervent
- Manual/support





# ICM+: Study (intervention) module (I)



Project Configuration

General Data Fields Events Data Archiving

Home Charts Data Tools

Login Minimise Ribbon Show Keyboard Users Projects Events Password Settings Registration About

System Configuration Help

Project Definition

Name: COGITATE Abbreviation: COGITATE

Description: Optimal CPP feasibility and effectiveness study .

Custom Module: COGITATE.dll

Data Folder: C:\Users\Jeanette\Documents\ICM+\Data\

Config Folder: C:\Users\Jeanette\Documents\ICM+\Configs\

Data File Name Format: <PROJECT>\_<DATE><TIME>\_<ANONYMID>\_<COMPUTER>

Default config profiles: COGITATE\_CPP.icmc  
COGITATE\_CPPopt.icmc

Enforce default configuration profiles ☒

OK Cancel Keyboard

Peter  
Jeanette  
Erta



# ICM+: study module settings(II)

Reviews

Study help

Documentation

```
[General]
ReviewStatsCalculationPeriodInHours=0.017
#ReviewDailyTimePoints=10:00, 14:00, 18:00, 22:00, 02:00, 06:00
FixedReviewIntervalIfDailyTimePointsNotSetInHours=6

# Rounding of the first start time, used only when no daily points provided
FixedReviewIntervalStartTimeRoundingInMin=0.017

# Period till the first review, used only when no daily points provided
FirstReviewTimeInHours=2.0

# Minimal period before the first CPPopt review can be triggered after start
FirstCPPoptReviewTimeInHours=2.0

# Period after which the flashing alert will reappear in the review window
AlertpausePeriodInMin=0.33

# Forms autoclose time
AutoCloseTimeInSec=240

ReviewTimerPrecisionInMin=0.20

# Auto close time period of the open review forms, and thus refresh of the target in the
CPPopt treatment arm
AutoReviewRestartTimeInMin=10

# Absolute value of allowed difference in target, since the time the review target was
fixed
TargetChangeTolerance=5

# Minimal period allowed between two consecutive reviews (the next one will be skipped
if within this period of the last)
ReviewRefractoryPeriodInMin=30

[Help]
infofile=COGITATE_helpinfo.txt

[Documents]
Study Protocol=COGiTATE_PROTOCOL v5.4.pdf
ICM+ SOP=COGiTATE_ICMSOP.pdf
TBI background module=COGITATE_TBI background module.pdf
Study module=COGiTATE_study module.pptm
FAQ=COGiTATE_FAQ.pdf

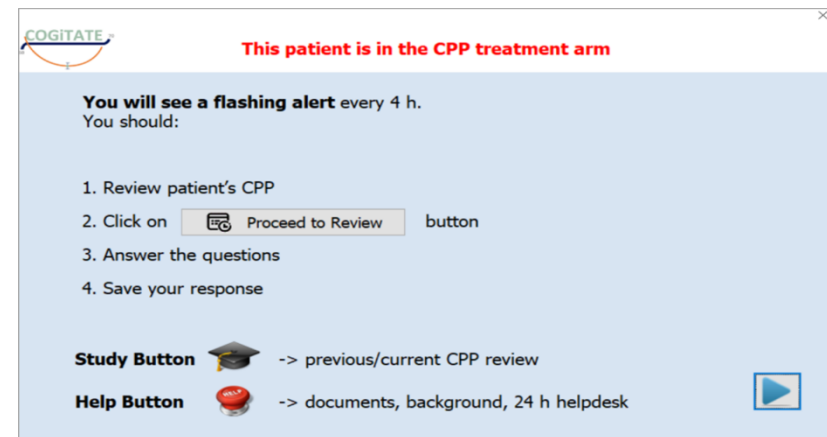
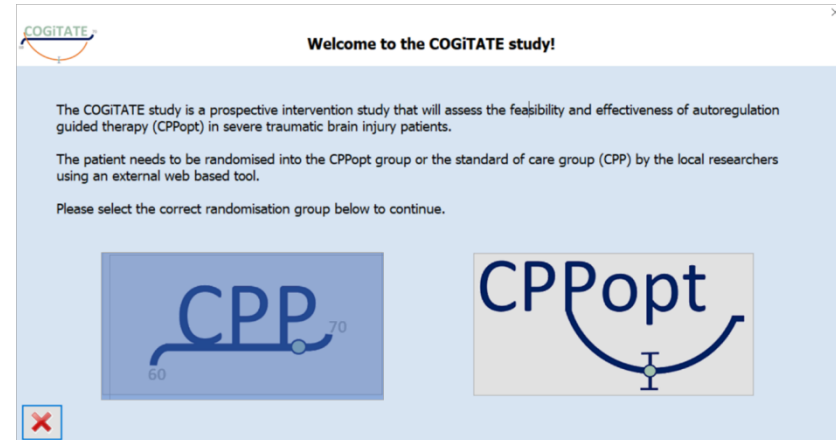
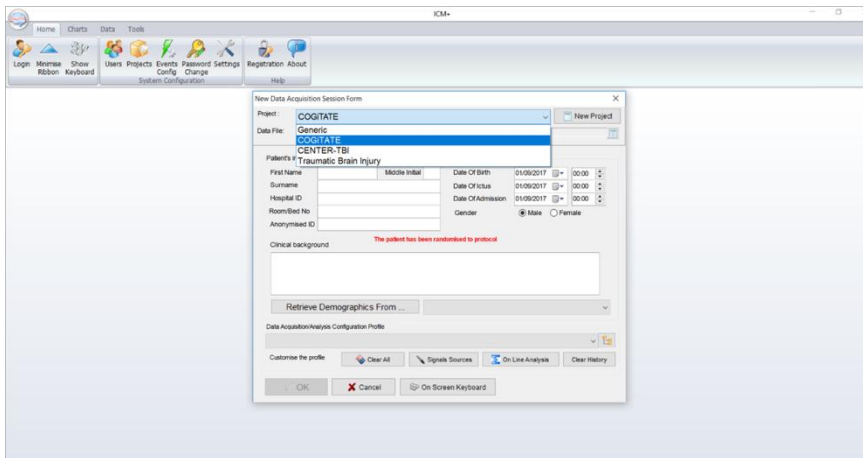
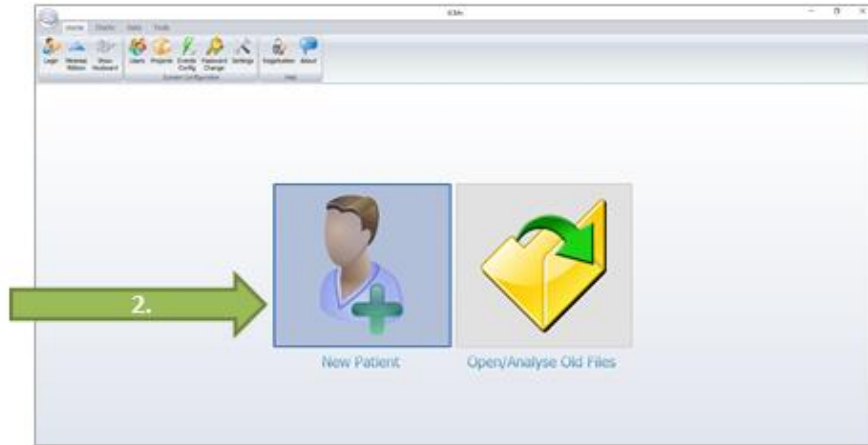
[SafeRanges]
CPPopt=50,100
```

Dynamics

'Safe' CPP ranges

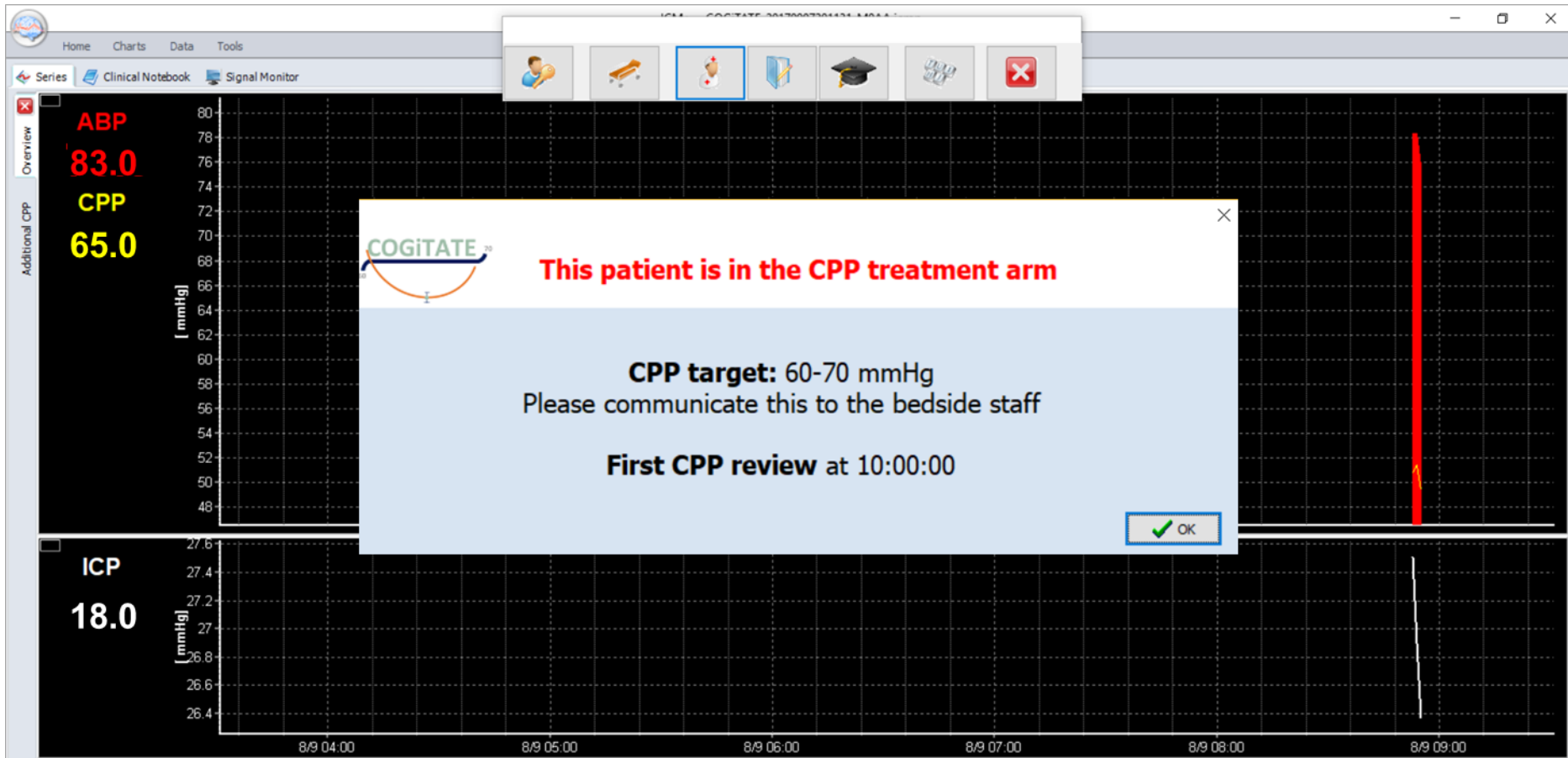


# How does it look like?



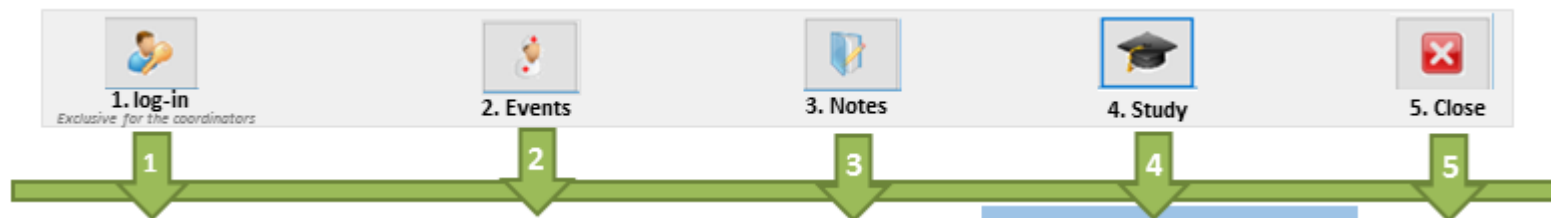
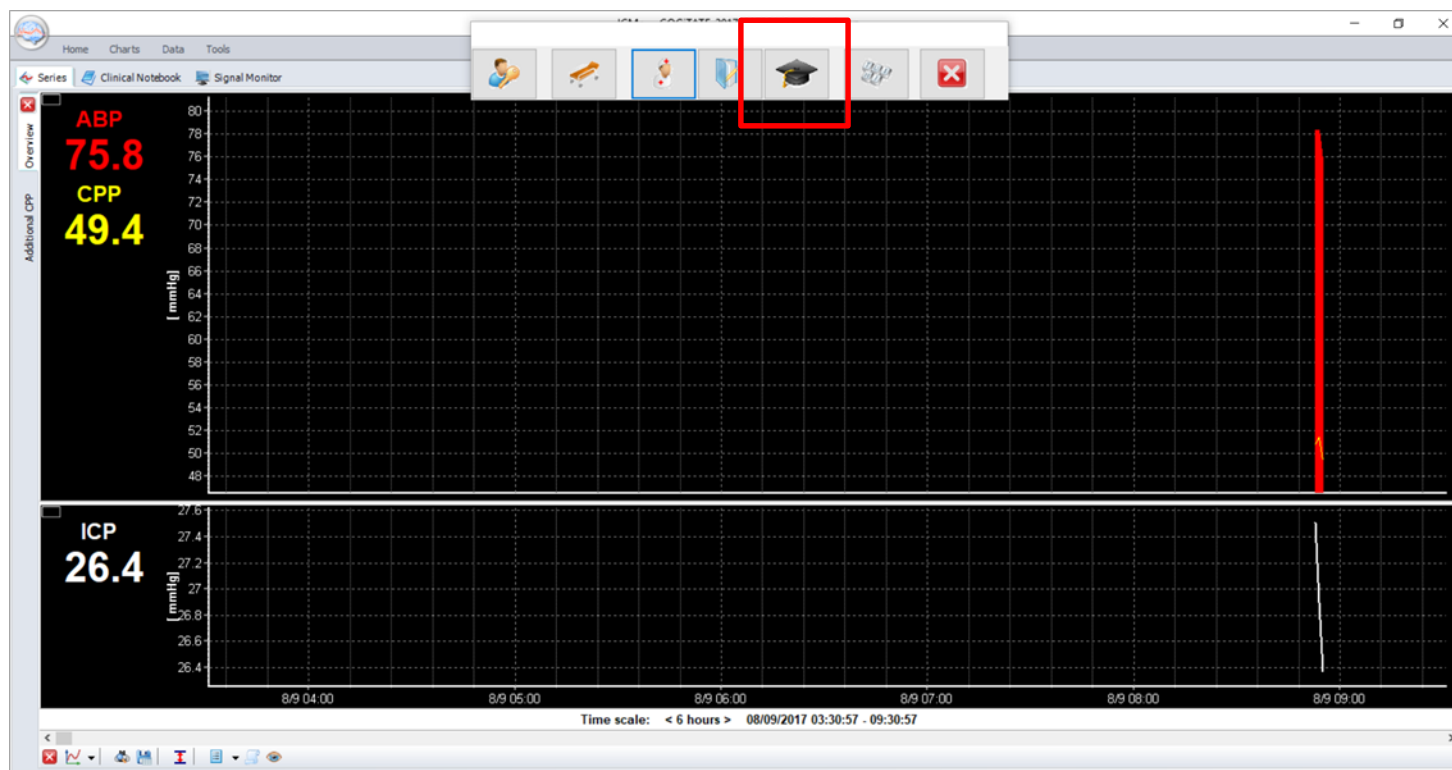


# How does it look like?





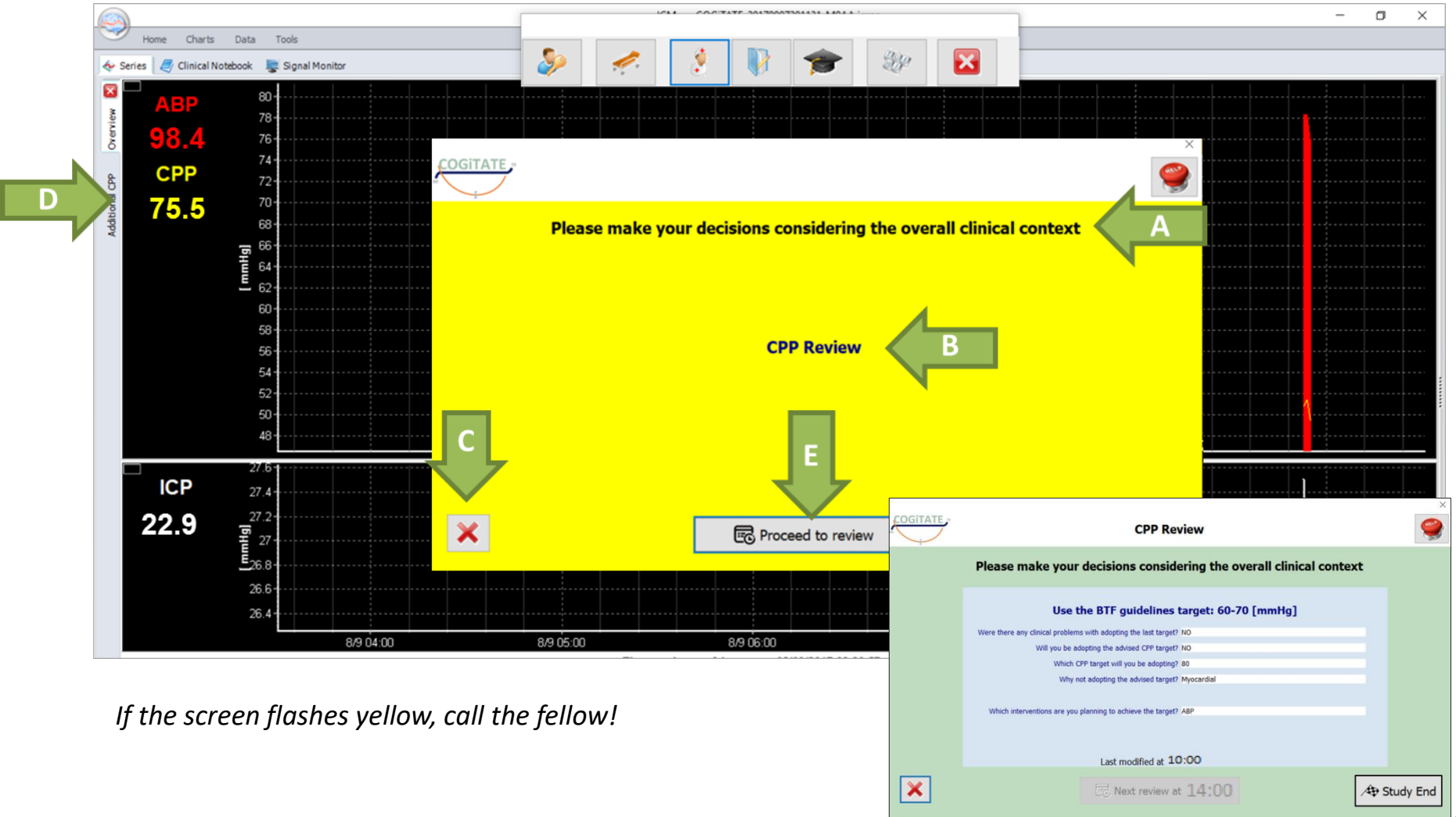
# How does it look like?



4. On fixed CPP review times a review screen automatically pops up. However, pressing this study button (academic chat) outside the fixed review moments, the last modified review form will be visible. You can also end the study here.



# How does it look like?

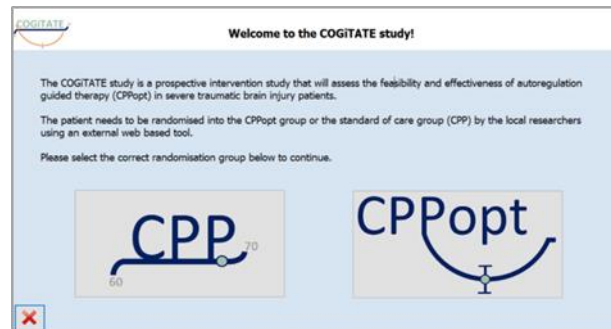
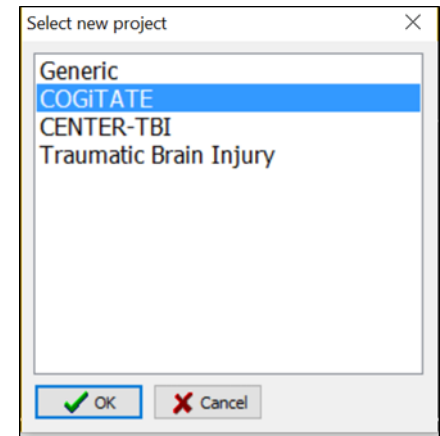
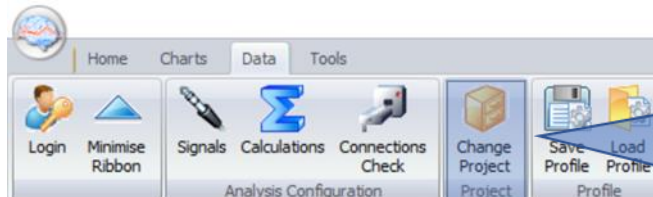


*If the screen flashes yellow, call the fellow!*





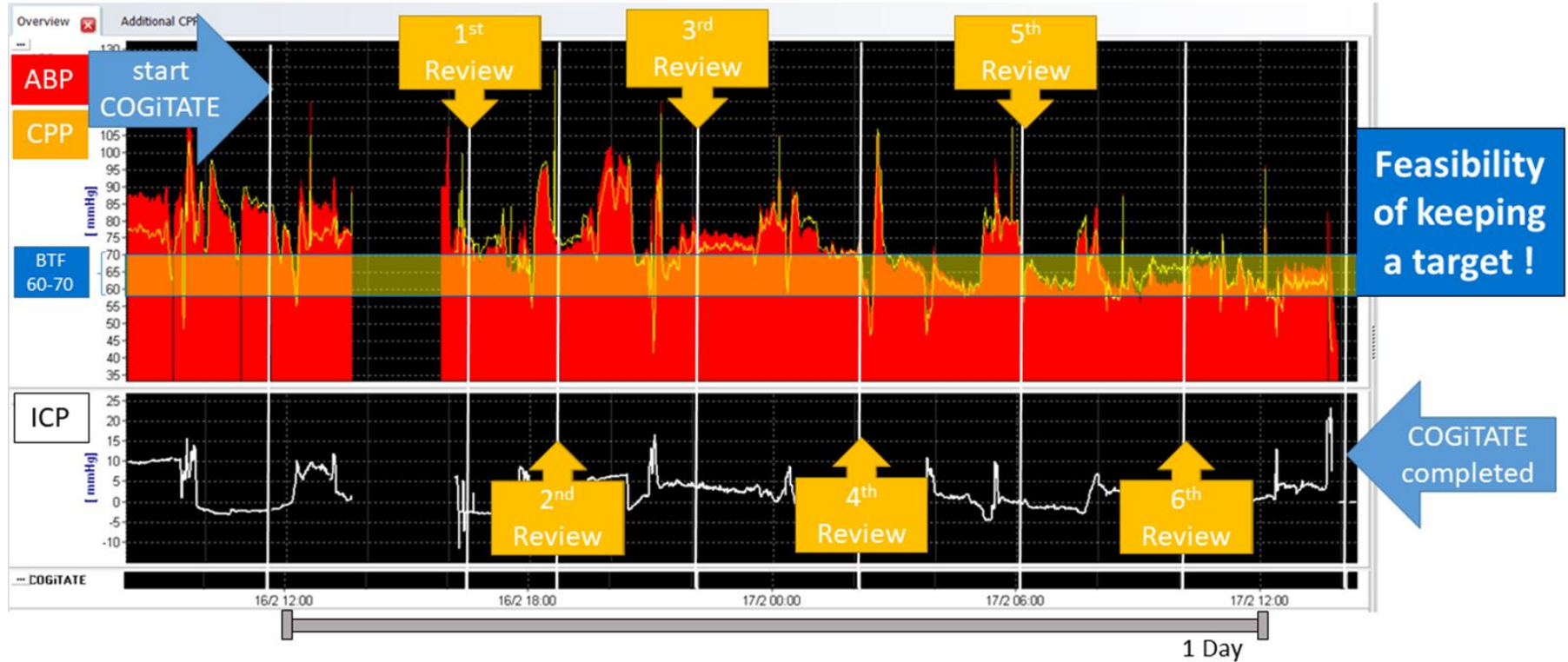
# New ICM+ button: change project



Observational → Intervention



# Results (n=15)



Provided by E Beqiri



# Conclusion

COGITATE



TEAMWORK





# Thank you

- Please follow us
  - [www.cppopt.org](http://www.cppopt.org)
  - @cppopt.org

## COGITATE investigators

- Cambridge
- Leuven
- Maastricht



*Jeanette Tas productions ©*