Generating plots in the documentation (section Examples)

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Objective

Generate the plots for the LaTeX user guide

Setup

loading libraries

Install package in development mode

```
dev_mode() # development mode
```

```
## Dev mode: ON
```

```
install.packages(pkgs=file.path(workDir,"npde_3.0.tar.gz"),repos=NULL)
```

```
## Installing package into '/home/eco/R-dev'
## (as 'lib' is unspecified)
```

```
library(npde)
```

Run examples

- remove warnings (name.ipred empty, etc...) **Romain** fait

```
## ------------------------------------------
## Distribution of npde :
##       nb of obs: 120
##            mean= 0.0668   (SE= 0.095 )
##        variance= 1.074   (SE= 0.14 )
##        skewness= 0.511
##        kurtosis= 0.2912
## ------------------------------------------
## Statistical tests (adjusted p-values):
##   t-test                : 1
##   Fisher variance test  : 1
##   SW test of normality  : 0.00819 **
##   Global test           : 0.00819 **
## ---
## Signif. codes: '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1
## ------------------------------------------
```

```
## ------------------------------------------
## Distribution of npde :
##       nb of obs: 300
##            mean= -0.03931   (SE= 0.056 )
##        variance= 0.9438   (SE= 0.077 )
##        skewness= 0.1147
##        kurtosis= 0.112
## ------------------------------------------
## Statistical tests (adjusted p-values):
##   t-test                : 1
##   Fisher variance test  : 1
##   SW test of normality  : 0.919
##   Global test           : 0.919
## ---
## Signif. codes: '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1
## ------------------------------------------

## ------------------------------------------
## Distribution of npde :
##       nb of obs: 169
##            mean= 0.1433   (SE= 0.07 )
##        variance= 0.8186   (SE= 0.089 )
##        skewness= -0.03812
##        kurtosis= -0.3733
## ------------------------------------------
## Statistical tests (adjusted p-values):
##   t-test                : 0.123
##   Fisher variance test  : 0.247
##   SW test of normality  : 1
##   Global test           : 0.123
## ---
## Signif. codes: '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1
## ------------------------------------------

## ------------------------------------------
## Distribution of npde :
##       nb of obs: 300
##            mean= 0.03101   (SE= 0.057 )
##        variance= 0.9715   (SE= 0.079 )
##        skewness= -0.006498
##        kurtosis= 0.8122
## ------------------------------------------
## Statistical tests (adjusted p-values):
##   t-test                : 1
##   Fisher variance test  : 1
##   SW test of normality  : 0.00364 **
##   Global test           : 0.00364 **
## ---
## Signif. codes: '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1
## ------------------------------------------

## ------------------------------------------
## Distribution of npde :
##       nb of obs: 300
##            mean= 0.03058   (SE= 0.062 )
```

```
##        variance= 1.164   (SE= 0.095 )
##        skewness= 0.04433
##        kurtosis= -0.05092
## ------------------------------------------
## Statistical tests (adjusted p-values):
##   t-test                : 1
##   Fisher variance test  : 0.162
##   SW test of normality  : 1
##   Global test           : 0.162
## ---
## Signif. codes: '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1
## ------------------------------------------

## ------------------------------------------
## Distribution of npde :
##       nb of obs: 247
##            mean= 0.03419   (SE= 0.06 )
##        variance= 0.8753   (SE= 0.079 )
##        skewness= -0.1149
##        kurtosis= -0.0497
## ------------------------------------------
## Statistical tests (adjusted p-values):
##   t-test                : 1
##   Fisher variance test  : 0.471
##   SW test of normality  : 1
##   Global test           : 0.471
## ---
## Signif. codes: '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1
## ------------------------------------------

## ------------------------------------------
## Distribution of npde :
##       nb of obs: 247
##            mean= 0.02928   (SE= 0.059 )
##        variance= 0.8549   (SE= 0.077 )
##        skewness= -0.07211
##        kurtosis= -0.4172
## ------------------------------------------
## Statistical tests (adjusted p-values):
##   t-test                : 1
##   Fisher variance test  : 0.288
##   SW test of normality  : 1
##   Global test           : 0.288
## ---
## Signif. codes: '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1
## ------------------------------------------
```

Theophylline example

- data
  - le plot(npdeData) ne marche pas **Romain** à faire pour la 3.1 (si possible en essayant d'utiliser le même code de base)
  - pour faire un graphe il faut passer par *plot.type="data"* ou *npde.plot.data()*
- VPC, scatterplot **Eco fait**

  - modifié pour que le tracé des percentiles observés soit fait avec les linetype et size de lobs (pas des bandes), par contre la couleur matche celle de la bande de prédiction correspondante

```
## Warning: Removed 12 rows containing missing values (geom_point).
```

```
## Warning: Removed 12 row(s) containing missing values (geom_path).
```

```
## pdf
##   2
```

```
## pdf
##   2
```

```
## pdf
##   2
```

Viral load example

- data
  - mêmes problèmes que plus haut
  - LOQ data should be plotted **Romain**
  - besoin de faire un waffle plot avec les 4 objets data, **Romain TODO** possible ? (sinon sauver 4 graphes)
  - complete data according to the censoring method when an npdeObject is given (plot just the LOQ data when the plot is called directly on a npdeData object) **Romain**

```
## pdf
##   2
```

- scatterplots and VPC
  - pb with VPC of x50 **Eco fait**
- possibilité d'utiliser un grid.arrange pour les 2 derniers graphes ? **Romain**
- VPC missing tite on y-axis

```
## pdf
##   2
```

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## pdf
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## pdf
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## pdf
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## pdf
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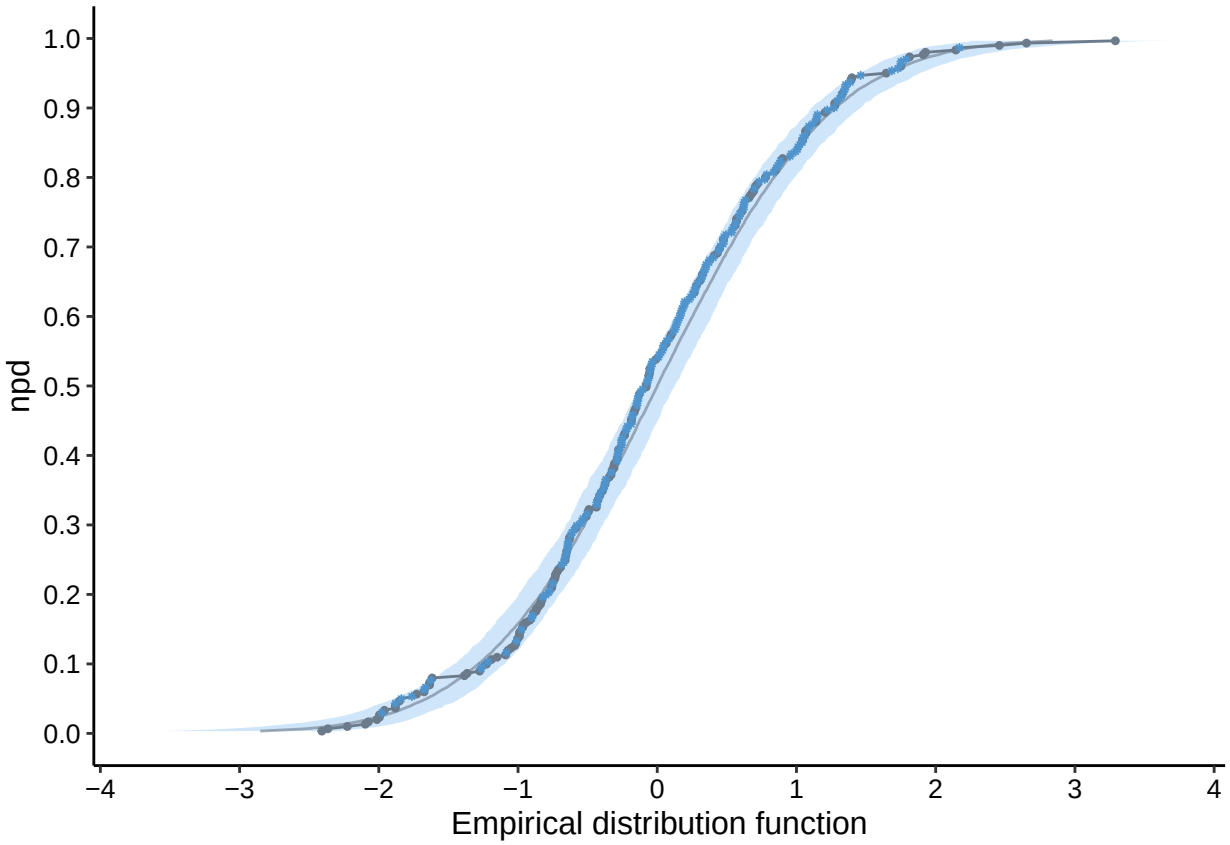
```

- P(Y<LOQ): changed defaults

```
## pdf
##   2
```

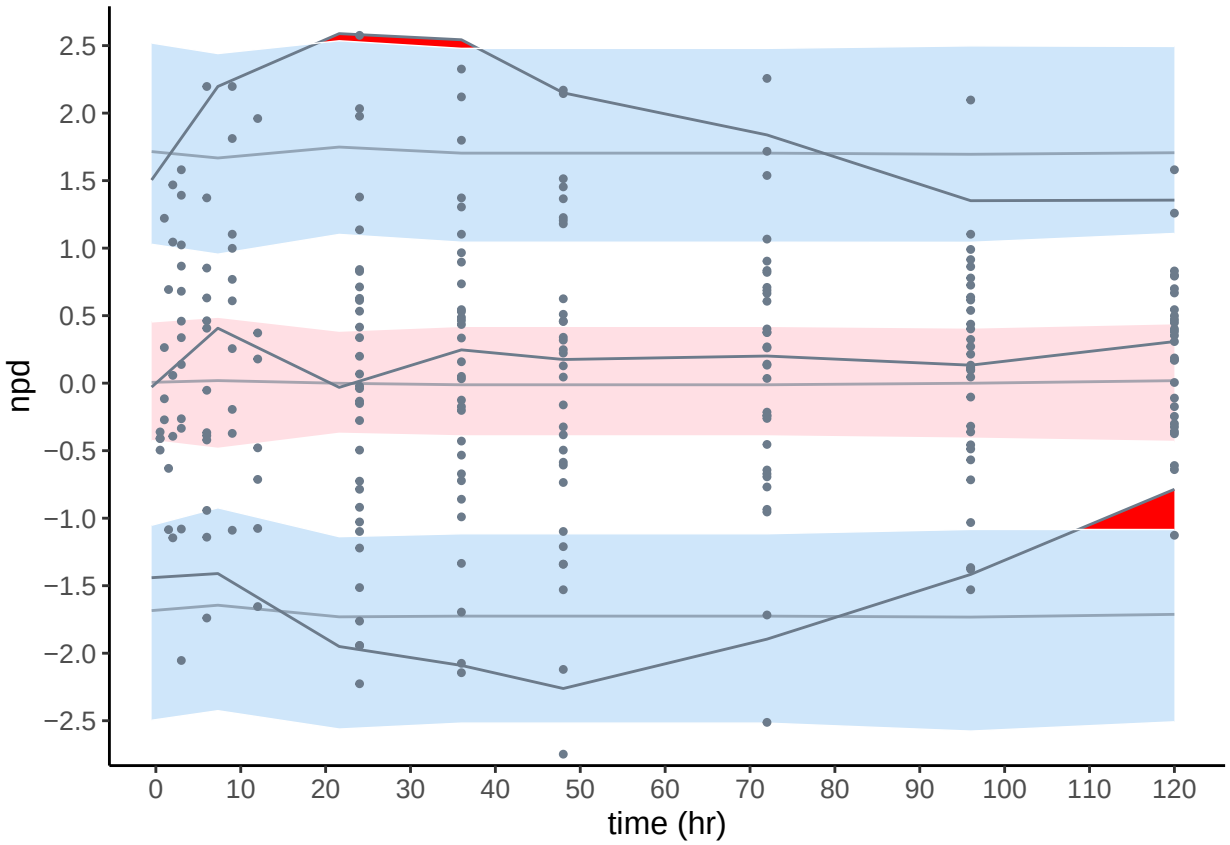


Warfarin

- **TODO:**
  - add to documentation
  - cov.scatter changed to covariates (default plot with covariates as in Brendel et al. 2010)
  - alternative: covsplit applied to the other types of graphs will produce graphs stratified by covariate categories/ranges
  - check npde.plot.scatterplot(wbase, which.x="cov", which.y="npde", which.cov="wt", bin.method="optimal") not rendering anything

```
## pdf
##   2
```

```
## pdf
##   2
```



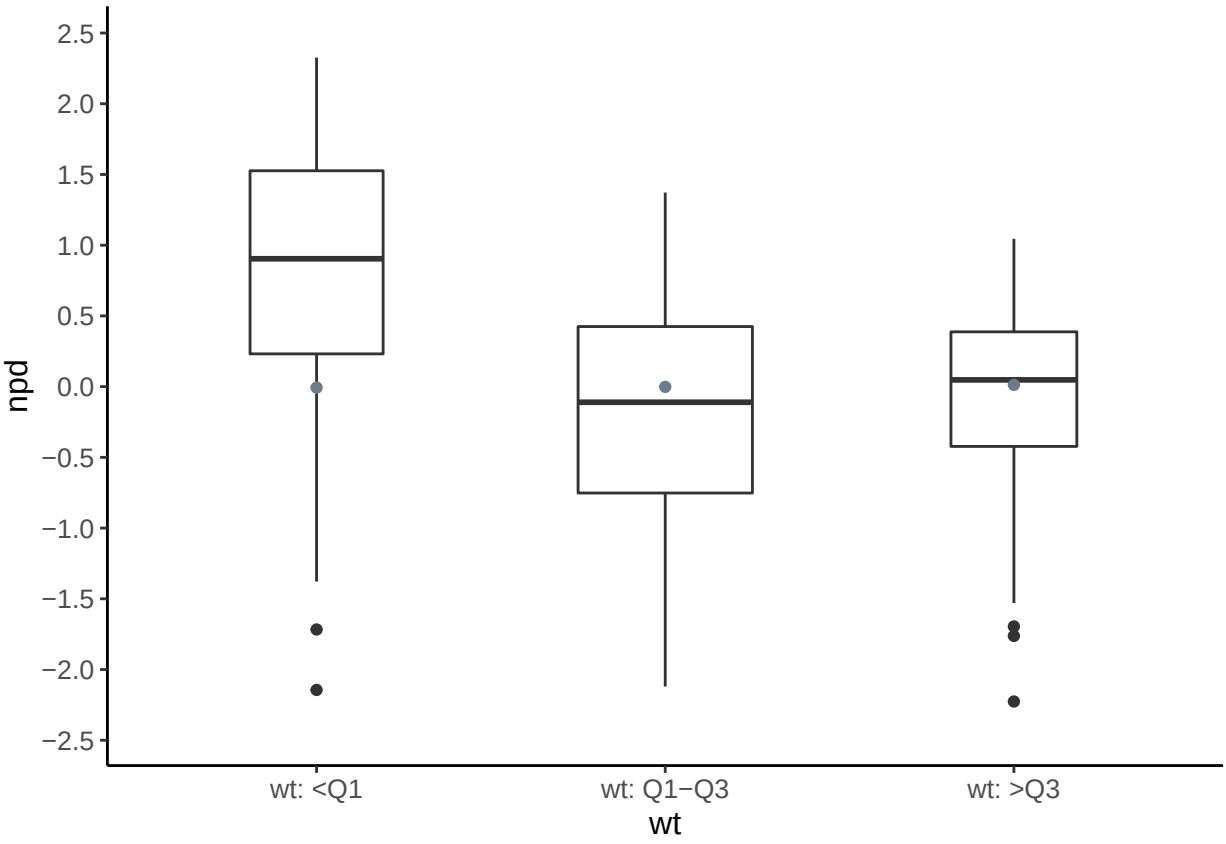

```
## list()
```

```
## pdf
##   2
```

```
## list()
```

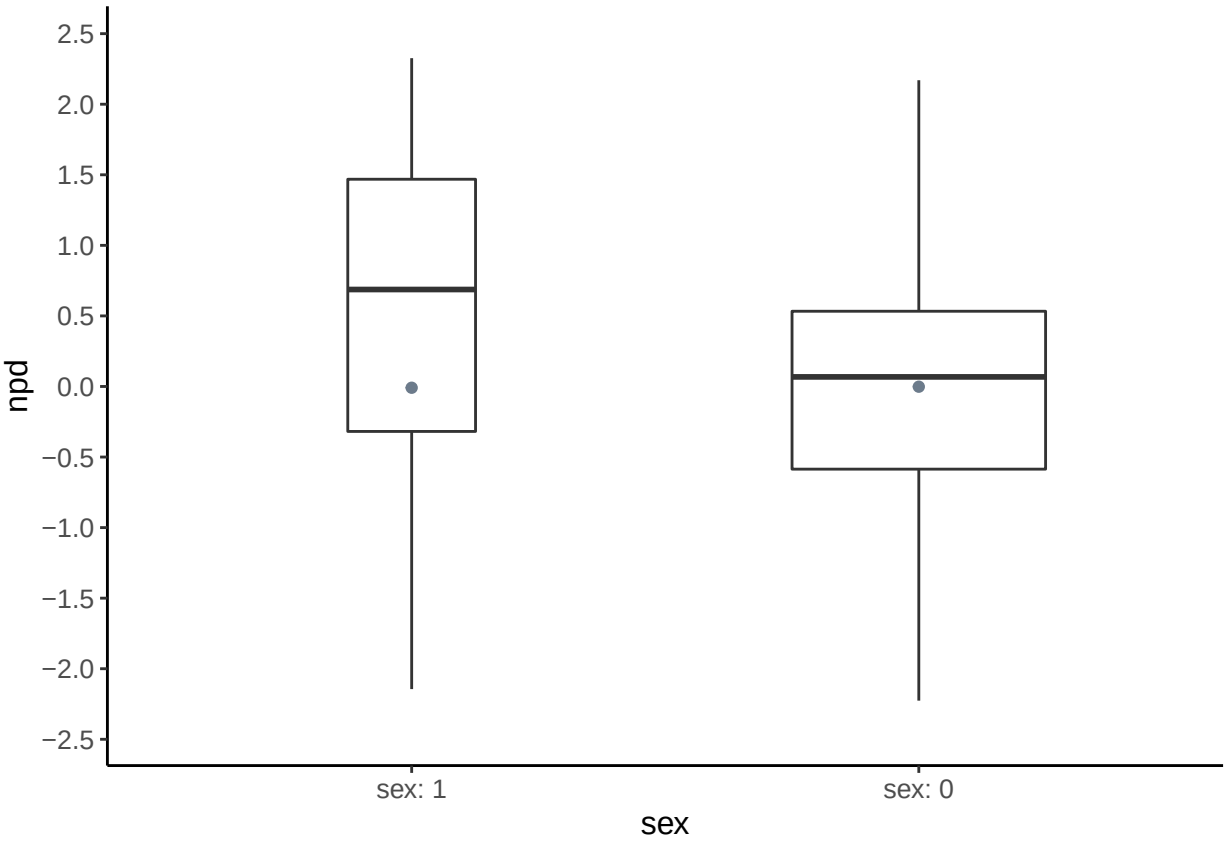
```
## [[1]]
```

```
## Warning: Removed 5 rows containing non-finite values (stat_boxplot).
```



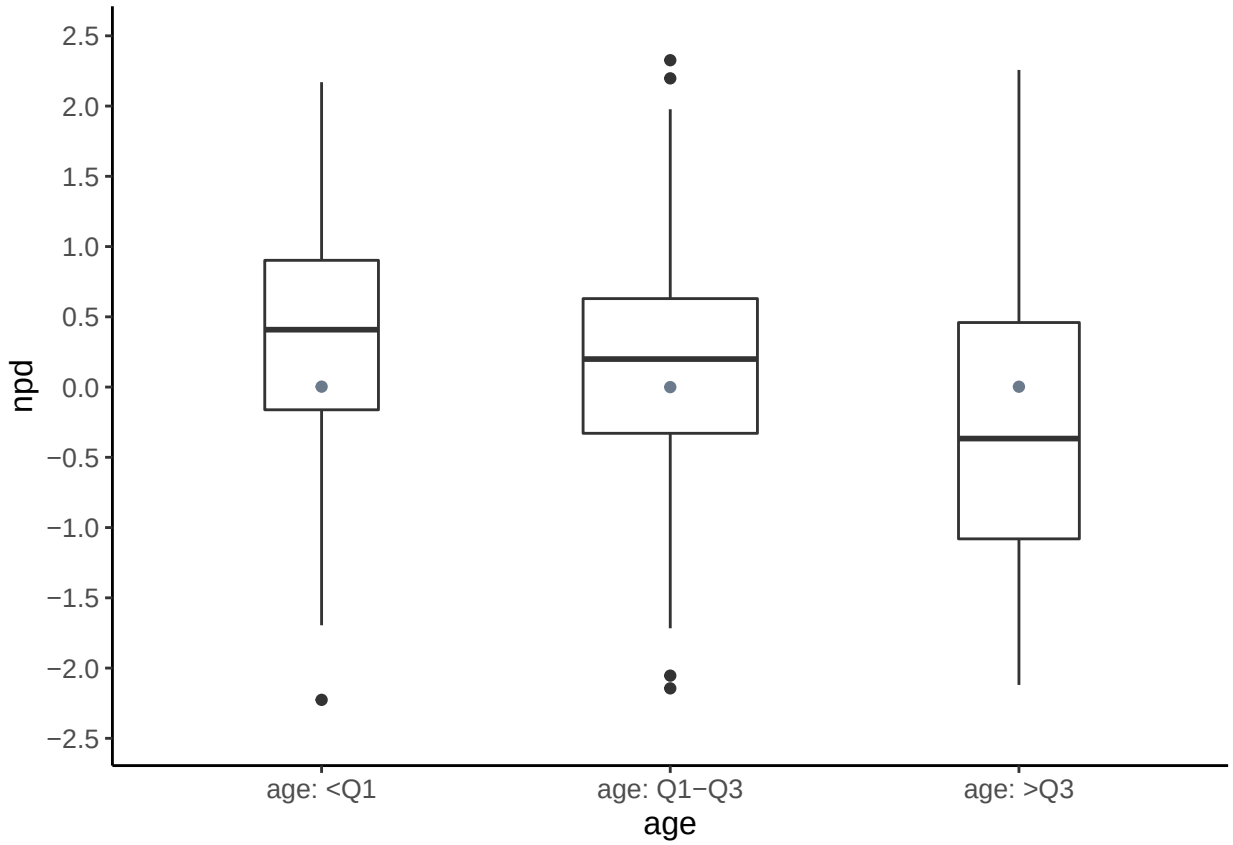

```
## [[1]]
```

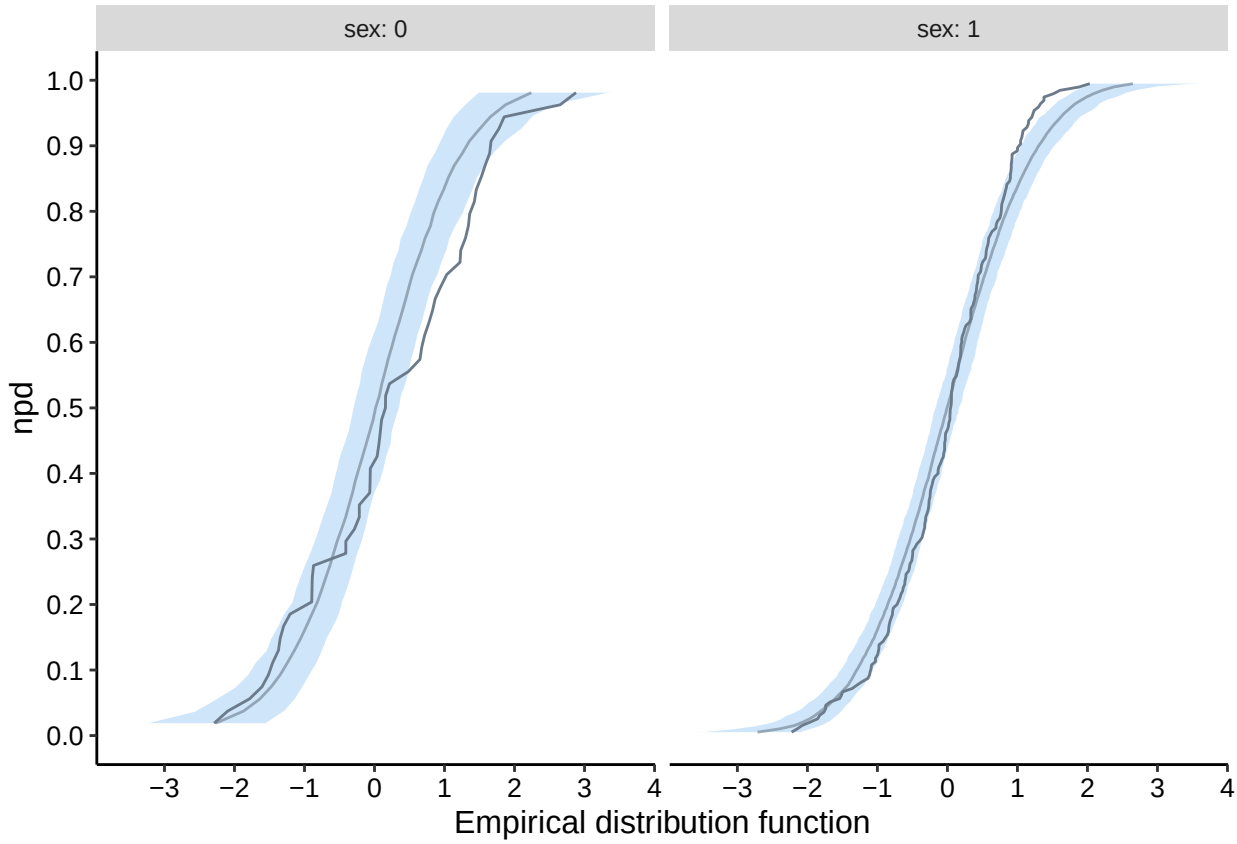
```
## Warning: Removed 5 rows containing non-finite values (stat_boxplot).
```

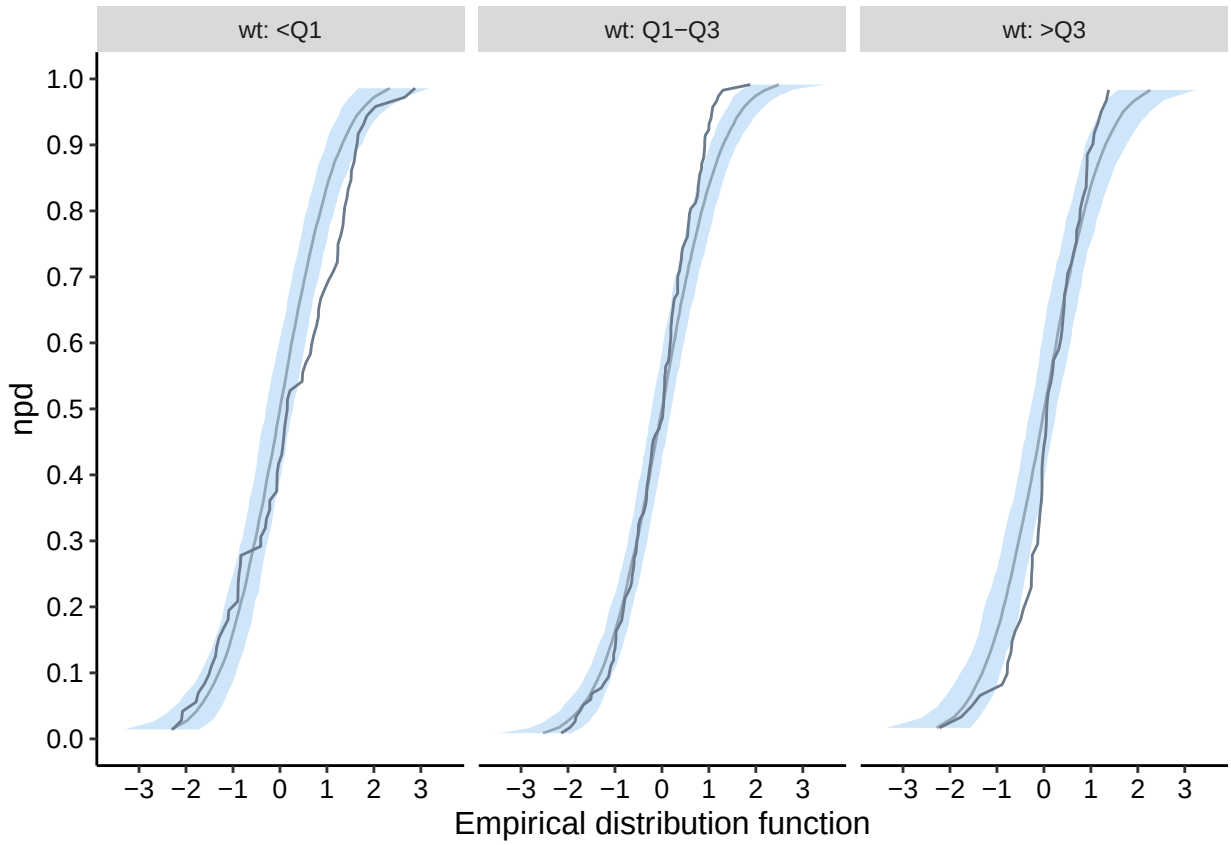


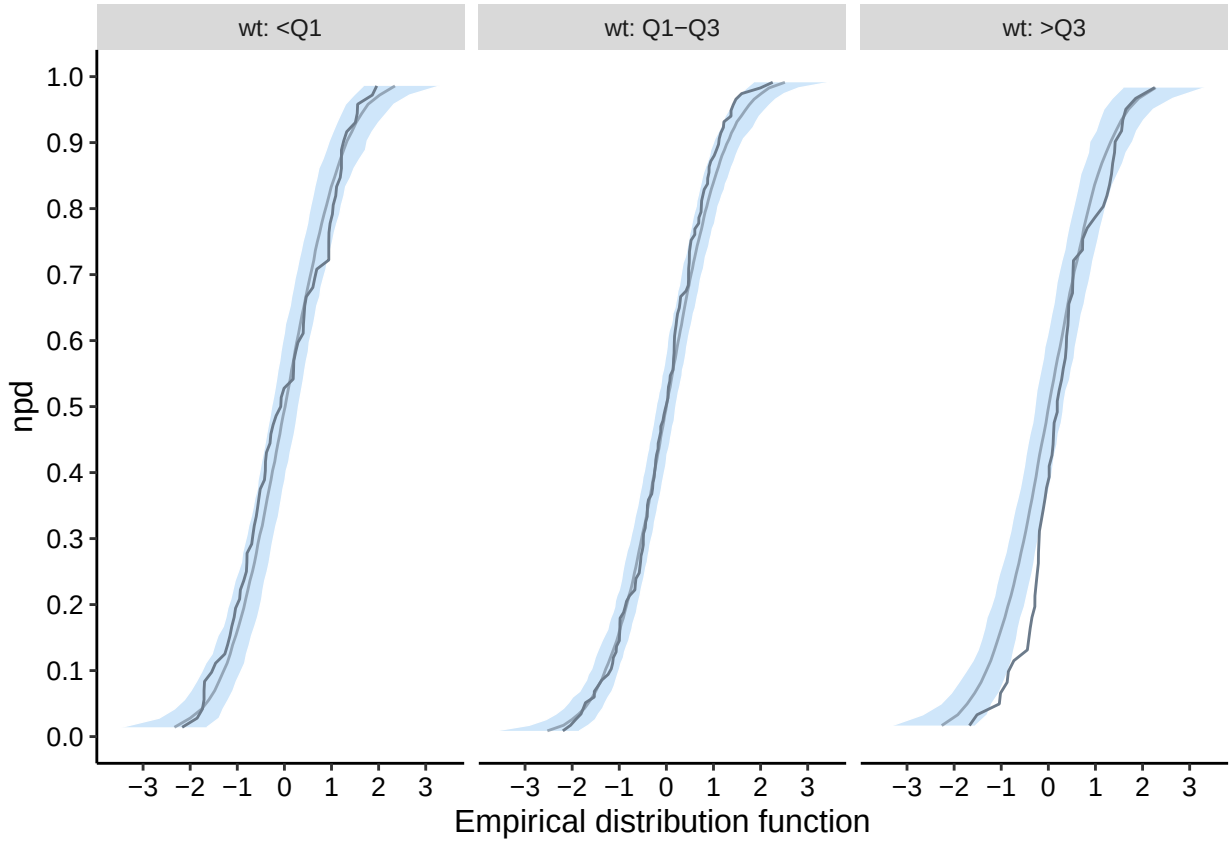

```
## [[1]]
```

```
## Warning: Removed 5 rows containing non-finite values (stat_boxplot).
```


2.5
2.0
1.5
1.0
0.5
0.0
−0.5
−1.0
−1.5
−2.0
−2.5
npd
age: <Q1
age: Q1−Q3
age: >Q3
age


sex: 0
sex: 1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
npd
−3
−2
−1
0
1
2
3
4
Empirical distribution function


wt: <Q1
wt: Q1−Q3
wt: >Q3
npd
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
−3 −2 −1 0 1 2 3
Empirical distribution function


wt: <Q1
wt: Q1−Q3
wt: >Q3
npd
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
−3 −2 −1 0 1 2 3
Empirical distribution function

```
## pdf
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```
## [[1]]
```

```
## Warning: Removed 2 rows containing non-finite values (stat_boxplot).
```

```
## pdf
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```

```
## pdf
##   2
```

Remifentanil (data will be on website)

Remove from documentation ?

End of file, deactivating development mode

```
## Dev mode: OFF
```