Tables

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Imports

```
library(tidyverse)
library(yaml)
library(kableExtra)
```

Loading data

```
load('../dataset/processed_data.RData')
load('../dataset/processed_dictionary.RData')

columns_list <- yaml.load_file("./auxiliar/columns_list.yaml")

outcome_column <- params$outcome_column
```

Numerical variables

```
medianWithoutNA <- function(x) {
   median(x[which(!is.na(x))])
}
i = 0
for (column in columns_list$numerical_columns[60:140]){
  print(column)
  df %>%
    group_by_at(vars(one_of(outcome_column))) %>%
    summarise('Mean' = mean(!!sym(column), na.rm = T),
              'Min' = min(!!sym(column), na.rm = T),
              'Median' = medianWithoutNA(!!sym(column)),
              'Max' = max(!!sym(column), na.rm = T),
              'Standard Deviation' = sd(!!sym(column), na.rm = T),
              'N' = n(),
              'Missing' = sum(is.na(!!sym(column)))) %>%
    ungroup %>%
    mutate(Min = ifelse(is.infinite(Min), NA, Min),
           Max = ifelse(is.infinite(Max), NA, Max)) %>%
    kbl(align = "l", booktabs = T, digits = 3, format = 'latex', label = i,
        caption = df_names %>% filter(variable.name == column) %>% .$field.label) %>%
    column_spec(1, bold = T, width = "8em") %>%
    row_spec(c(1) - 1, extra_latex_after = "\\rowcolor{gray!6}") %>%
    collapse_rows(1, latex_hline = "none") %>%
    kable_styling(latex_options = c("HOLD_position", "repeat_header")) %>%
    print

  i <- i + 1
}
```

[1] “antiarritmico”

Table 1: Antiarritmicos

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	3.181	0	0	445	15.911	13226	2616
1	10.292	0	0	844	39.151	2798	903

[1] “antihipertensivo”

Table 2: Antihipertensivo

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.440	0	0	160	4.272	13226	2616
1	0.858	0	0	349	10.141	2798	903

[1] “betabloqueador”

Table 3: Betabloqueador

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	1.124	0	0	388	8.479	13226	2616
1	1.038	0	0	81	5.486	2798	903

[1] “ieca_bra”

Table 4: IECA/BRA

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	8.361	0	2	530	18.817	13226	2616
1	12.968	0	2	773	36.275	2798	903

[1] “dva”

Table 5: DVA

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	4.677	0	0	1044	28.331	13226	2616
1	24.030	0	0	1917	99.270	2798	903

[1] “digoxina”

Table 6: Digoxina

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.196	0	0	50.0	1.487	13226	2616
1	0.468	0	0	46.5	2.505	2798	903

[1] “estatina”

Table 7: Estatinas

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	4.812	0	0	421	15.519	13226	2616
1	7.971	0	0	364	24.255	2798	903

[1] “diuretico”

Table 8: Diuretico

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	7.692	0	0.0	1290	42.648	13226	2616
1	35.004	0	1.5	2966	147.228	2798	903

[1] “vasodilatador”

Table 9: Vasodilator

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	7.792	0	0	2408.0	47.201	13226	2616
1	24.683	0	0	3820.5	121.617	2798	903

[1] “insuf_cardiaca”

Table 10: Insuficiência cardíaca (ivabradina, levosimedan, milrinona, nesiritida, carvedilol)

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	3.979	0	0	453.0	15.440	13226	2616
1	8.439	0	0	354.5	24.293	2798	903

[1] “espironolactona”

Table 11: Antagonista da Aldosterona (espironolactona)

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	1.839	0	0	204	7.351	13226	2616
1	3.927	0	0	255	12.469	2798	903

[1] “bloq_calcio”

Table 12: Bloqueador do canal de calcio

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.570	0	0	509	9.088	13226	2616
1	0.972	0	0	370	12.210	2798	903

[1] “trombolitico”

Table 13: Trombolitico

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.001	0	0	3	0.042	13226	2616
1	0.003	0	0	2	0.069	2798	903

[1] “antiplaquetario_vo”

Table 14: Antiplaquetario VO

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0	0	0	0	0	13226	2616
1	0	0	0	0	0	2798	903

[1] “antiplaquetario_ev”

Table 15: Antiplaquetario EV

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.009	0	0	8	0.172	13226	2616
1	0.022	0	0	4	0.216	2798	903

[1] “insulina”

Table 16: Insulina

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.092	0	0	16	0.465	13226	2616
1	0.161	0	0	10	0.665	2798	903

[1] “hipoglicemiante”

Table 17: Hipoglicemiante

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.361	0	0	90	2.903	13226	2616
1	0.310	0	0	39	2.280	2798	903

[1] “hormonio_tireoidiano”

Table 18: Hormonio tireoidiano

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0	0	0	0	0	13226	2616
1	0	0	0	0	0	2798	903

[1] “broncodilatador”

Table 19: Broncodiltador

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0	0	0	0	0	13226	2616
1	0	0	0	0	0	2798	903

[1] “anticonvulsivante”

Table 20: Anticonvulsivante

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.820	0	0	334	10.006	13226	2616
1	2.294	0	0	390	18.128	2798	903

[1] “psicofarmacos”

Table 21: Psicofármacos (Ansiolítico/ antidepressivo/ antipsicótico)

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	3.460	0	0	387	12.040	13226	2616
1	7.368	0	0	573	24.604	2798	903

[1] “atb”

Table 22: Antibióticos

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	13.001	0	4	1812	59.978	13226	2616
1	27.032	0	4	1137	80.899	2798	903

[1] “antifungico”

Table 23: Antifúngicos

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.266	0	0	122	3.192	13226	2616
1	1.495	0	0	102	8.332	2798	903

[1] “antiviral”

Table 24: Antiviral

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.115	0	0	131	2.670	13226	2616
1	0.161	0	0	86	3.083	2798	903

[1] “antiretroviral”

Table 25: Antiretroviral

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.010	0	0	32	0.482	13226	2616
1	0.001	0	0	1	0.023	2798	903

[1] “classe_meds_qtde”

Table 26: Quantidade de classes medicamentosas utilizadas

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	4.608	1	4	17	2.492	13226	3748
1	6.044	1	6	16	2.802	2798	1266

[1] “classe_meds_cardio_qtde”

Table 27: Quantidade de classes medicamentosas de ação cardiovascular

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	3.019	1	3	10	1.729	13226	5241
1	3.863	1	4	9	1.923	2798	1354

[1] “meds_cardiovasc_qtde”

Table 28: Quantidade de medicamentos de ação cardiovascular

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	39.851	0	9	5140	124.820	13226	2616
1	122.677	0	17	8738	351.361	2798	903

[1] “meds_antimicrobianos”

Table 29: Quantidade de antimicrobianos (antibióticos e antifúngicos)

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	13.267	0	4	1812	61.037	13226	2616
1	28.527	0	4	1137	85.392	2798	903

[1] “vni”

Table 30: Ventilação não invasiva

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.021	0	0	42	0.668	13226	2079
1	0.190	0	0	114	3.564	2798	687

[1] “cec”

Table 31: Instalação de CEC

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.013	0	0	2	0.113	13226	2079
1	0.014	0	0	2	0.122	2798	687

[1] “cir_cardiovascular”

Table 32: Cirurgia Cardiovascular

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.058	0	0	9	0.373	13226	2079
1	0.063	0	0	9	0.458	2798	687

[1] “transplante_cardiaco”

Table 33: Transplante cardíaco

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.002	0	0	1	0.042	13226	2079
1	0.001	0	0	1	0.031	2798	687

[1] “cir_toracica”

Table 34: Cirurgia Toracica

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.003	0	0	4	0.067	13226	2079
1	0.010	0	0	9	0.216	2798	687

[1] “outros_proced_cirurgicos”

Table 35: Outros procedimentos cirúrgicos (cir geral, gastrocir, plástica, uro, vascular)

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.107	0	0	11	0.531	13226	2079
1	0.169	0	0	22	0.803	2798	687

[1] “traqueostomia”

Table 36: Traqueostomia

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.001	0	0	1	0.030	13226	2079
1	0.009	0	0	8	0.215	2798	687

[1] “icp”

Table 37: Intervenção coronária percutânea

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.010	0	0	4	0.122	13226	2079
1	0.022	0	0	4	0.205	2798	687

[1] “intervencao_cv”

Table 38: Intervenção cardiovascular em laboratório de hemodinâmica (alcoolização septal, valvoplastia percutânea, stent em vasos pulmonares)

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.007	0	0	3	0.119	13226	2079
1	0.007	0	0	2	0.097	2798	687

[1] “stent”

Table 39: Stent

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0	0	0	0	0.000	13226	2079
1	0	0	0	1	0.022	2798	687

[1] “angioplastia”

Table 40: Angioplastia

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.001	0	0	1	0.033	13226	2079
1	0.004	0	0	2	0.075	2798	687

[1] “cateterismo”

Table 41: Cateterismo

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.123	0	0	7	0.402	13226	2079
1	0.144	0	0	5	0.442	2798	687

[1] “eletrofisiologia”

Table 42: Eletrofisiologia

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.080	0	0	11	0.470	13226	2079
1	0.093	0	0	7	0.519	2798	687

[1] “suporte_hemod”

Table 43: Suporte cardiocirculatório (ECMO, BIA, Bio-PUMP)

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.081	0	0	535	5.369	13226	2079
1	0.370	0	0	177	6.547	2798	687

[1] “cateter_venoso_central”

Table 44: Cateter venoso central

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.027	0	0	4	0.194	13226	2079
1	0.050	0	0	5	0.300	2798	687

[1] “drenagem_torax”

Table 45: Drenagem de tórax (instalação /troca) e punção pericárdica ou pleural

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.004	0	0	3	0.081	13226	2079
1	0.018	0	0	6	0.245	2798	687

[1] “proced_invasivos_qtde”

Table 46: Quantidade de procedimentos invasivos

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.517	0	0	554	5.737	13226	2079
1	0.973	0	0	197	7.150	2798	687

[1] “cve_desf”

Table 47: Cardioversão/ Desfibrilação (sessão)

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.005	0	0	5	0.107	13226	2681
1	0.015	0	0	4	0.206	2798	923

[1] “transfusao”

Table 48: Transfusão de hemoderivados

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.028	0	0	34	0.525	13226	2079
1	0.183	0	0	61	2.150	2798	687

[1] “interconsulta”

Table 49: Interconsulta médica (Especialidades cirúrgicas, infecto, uro, nefro, psiquiatra, dermato, alergista, oncologista, geriatra, etc)

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.354	0	0	199	2.862	13226	2079
1	0.736	0	0	115	5.537	2798	687

[1] “equipe_multiprof”

Table 50: Equipe Multiprofissional (enf, fono, fisio, nutri, serviço social, psicologia)

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	2.872	0	0	365	12.609	13226	2079
1	6.914	0	1	420	25.528	2798	687

[1] “ecg”

Table 51: ECG

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	3.817	0	2	97	5.568	13226	2079
1	5.876	0	3	141	10.108	2798	687

[1] “holter”

Table 52: Holter

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.102	0	0	5	0.351	13226	2079
1	0.135	0	0	3	0.395	2798	687

[1] “teste_esforco”

Table 53: Teste de esforço

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.011	0	0	3	0.113	13226	2079
1	0.004	0	0	1	0.061	2798	687

[1] “espiro_ergoespiro”

Table 54: Espirometria / Ergoespirometria

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.004	0	0	2	0.069	13226	2079
1	0.004	0	0	1	0.065	2798	687

[1] “tilt_teste”

Table 55: Tilt Test

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.002	0	0	2	0.049	13226	2079
1	0.003	0	0	1	0.058	2798	687

[1] “polissonografia”

Table 56: Polissonografia

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.001	0	0	2	0.044	13226	2079
1	0.002	0	0	1	0.049	2798	687

[1] “metodos_graficos_qtde”

Table 57: Quantidade de exames por métodos gráficos

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	3.939	0	2	97	5.713	13226	2079
1	6.025	0	3	143	10.201	2798	687

[1] “laboratorio”

Table 58: Exames laboratoriais (exames bioquímicos, exames hematologia/coagulação, anticorpos, dosagem sérica de fármacos)

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	56.657	0	10	3474	162.832	13226	2079
1	134.078	0	12	3608	338.918	2798	687

[1] “cultura”

Table 59: Culturas (hemocultura, cultura de secreções, urocultura e cultura de cateteres)

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.279	0	0	25	1.111	13226	2079
1	0.856	0	0	48	2.971	2798	687

[1] “analises_clinicas_qtde”

Table 60: Quantidade de exames de análises clínicas

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	56.936	0	10	3487	163.686	13226	2079
1	134.933	0	12	3645	341.337	2798	687

[1] “citologia”

Table 61: Citologias

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.004	0	0	5	0.089	13226	2079
1	0.035	0	0	8	0.320	2798	687

[1] “biopsia”

Table 62: Biopsias (cardíaca, esterno, parede torácica, tumor em mediastino, pulmonar)

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.016	0	0	10	0.269	13226	2079
1	0.010	0	0	6	0.181	2798	687

[1] “histopatologia_qtde”

Table 63: Quantidade de exames histopatológicos

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.021	0	0	10	0.291	13226	2079
1	0.045	0	0	8	0.378	2798	687

[1] “angio_rm”

Table 64: Angio RM

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.004	0	0	4	0.086	13226	2079
1	0.004	0	0	2	0.081	2798	687

[1] “angio_tc”

Table 65: Angio TC

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.033	0	0	6	0.227	13226	2079
1	0.053	0	0	9	0.362	2798	687

[1] “angiografia”

Table 66: Angiografia

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.002	0	0	3	0.052	13226	2079
1	0.002	0	0	1	0.043	2798	687

[1] “aortografia”

Table 67: Aortografia

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.002	0	0	2	0.046	13226	2079
1	0.004	0	0	2	0.072	2798	687

[1] “arteriografia”

Table 68: Arteriografia

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.001	0	0	2	0.028	13226	2079
1	0.001	0	0	1	0.031	2798	687

[1] “cavografia”

Table 69: Cavografia

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.008	0	0	1	0.089	13226	2079
1	0.006	0	0	1	0.075	2798	687

[1] “cintilografia”

Table 70: Cintilografia

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.060	0	0	5	0.340	13226	2079
1	0.101	0	0	4	0.431	2798	687

[1] “ecocardiograma”

Table 71: Ecocardiograma

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.525	0	0	24	1.196	13226	2079
1	0.834	0	0	24	1.753	2798	687

[1] “endoscopia”

Table 72: Exames endoscópicos (EDA, colonoscopia, retossigmoidoscopia, broncoscopia)

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.015	0	0	6	0.167	13226	2079
1	0.041	0	0	3	0.254	2798	687

[1] “flebografia”

Table 73: Flebografia

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.035	0	0	5	0.287	13226	2079
1	0.042	0	0	5	0.314	2798	687

[1] “pet_ct”

Table 74: PET-CT

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.005	0	0	3	0.074	13226	2079
1	0.009	0	0	2	0.106	2798	687

[1] “ultrassom”

Table 75: Ultrassom

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.158	0	0	14	0.745	13226	2079
1	0.418	0	0	28	1.488	2798	687

[1] “tomografia”

Table 76: Tomografia

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.154	0	0	15	0.659	13226	2079
1	0.288	0	0	15	0.954	2798	687

[1] “radiografia”

Table 77: Radiografias

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	2.877	0	2	192	6.876	13226	2079
1	6.017	0	2	261	15.496	2798	687

[1] “ressonancia”

Table 78: Ressonancia magnetica

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.071	0	0	6	0.304	13226	2079
1	0.082	0	0	4	0.324	2798	687

[1] “exames_imagem_qtde”

Table 79: Quantidade de exames diagnóstico por imagem

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	3.948	0	2	232	8.666	13226	2079
1	7.903	0	2	281	18.381	2798	687

[1] “dieta_enteral”

Table 80: Dieta enteral (frasco)

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.016	0	0	91	0.957	13226	2682
1	0.358	0	0	195	6.595	2798	924

[1] “dieta_parenteral”

Table 81: Dieta parenteral (frasco)

death	Mean	Min	Median	Max	Standard Deviation	N	Missing
0	0.000	0	0	3	0.029	13226	2682
1	0.015	0	0	14	0.364	2798	924

Categorical variables

```
paste_matrix <- function(...,sep = " ",collapse = NULL){
    n <- max(sapply(list(...),nrow))
    p <- max(sapply(list(...),ncol))

    matrix(paste(...,sep = sep,collapse = collapse),n,p)
}
```

```
percent <- function(x) paste0("(", lapply(x, as.character), "%)")

addpercentage <- function(df, horizontal = FALSE){
  if (horizontal){
    x <- df %>%
      prop.table(margin = 1) %>%
      addmargins(FUN = list(Total = sum), quiet = TRUE) %>%
      round(2) * 100

    x[nrow(x),] <- " "
    x[-(nrow(x)),] <- lapply(x[-(nrow(x)), ], percent)
  } else {
    x <- df %>%
      prop.table(margin = 2) %>%
      addmargins(FUN = list(Total = sum), quiet = TRUE) %>%
      round(2) * 100

    x[, ncol(x)] <- " "
    x[, -(ncol(x))] <- lapply(x[, -(ncol(x))], percent)
  }

  y <- matrix(x, nrow = nrow(df) + 1)

  df <- df %>%
```

```
    addmargins(FUN = list(Total = sum), quiet = TRUE)

  df_final <- paste_matrix(df, y)
  rownames(df_final) <- rownames(df)
  colnames(df_final) <- colnames(df)
  return(df_final)
}
```

```
transpose_columns <- c()

for (column in columns_list$categorical_columns){
  if (length(unique(df[[column]])) > 5) next

  variable_name <- df_names %>%
    filter(variable.name == column) %>%
    .$field.label

  abbreviated_name <- df_names %>%
    filter(variable.name == column) %>%
    .$field.label

  caption <- sprintf('Contingency table between %s and %s',
                     str_replace(outcome_column, "_", " "),
                     variable_name)

  if (column %in% transpose_columns){

    temp_table <- table(df[[column]],
                        df[[outcome_column]],
                        useNA = "ifany") %>%
      addpercentage(horizontal = TRUE)

    has_na <- df[[column]] %>% is.na() %>% sum > 0

    if (has_na){
      rownames(temp_table)[nrow(temp_table) - 1] <- "NA"
    }

    t <- temp_table %>%
      as.data.frame %>%
      rownames_to_column(var=abbreviated_name) %>%
      kbl(align = "c", booktabs = T, digits = 2, format = 'latex',
          caption = caption) %>%
      row_spec(length(unique(df %>% .[[column]] %>% replace_na("NA"))),
               hline_after = T) %>%
      collapse_rows(1, latex_hline = "none") %>%
      column_spec(4, border_right = T) %>%
      add_header_above(c(setNames(1, ' '),
                         setNames(length(unique(df[[outcome_column]])),
                                  outcome_column))) %>%
      kable_styling(latex_options = c("HOLD_position", "repeat_header"))

  } else {
    temp_table <- table(df[[outcome_column]],
                        df[[column]],
                        useNA = "ifany") %>%
      addpercentage

    has_na <- df[[column]] %>% is.na() %>% sum > 0

    if (has_na){
```

```
      colnames(temp_table)[ncol(temp_table) - 1] <- "NA"
    }

    t <- temp_table %>%
      as.data.frame %>%
      rownames_to_column(var=outcome_column) %>%
      kbl(align = "c", booktabs = T, digits = 2, format = 'latex',
          caption = caption, label = i) %>%
      row_spec(2, hline_after = T) %>%
      column_spec(length(unique(df %>% .[[column]] %>% replace_na("NA"))) + 1,
                  border_right = T) %>%
      collapse_rows(1, latex_hline = "none") %>%
      add_header_above(c(' ' = 1,
                         setNames(length(unique(df[[column]])),
                                  abbreviated_name))) %>%
      kable_styling(latex_options = c("HOLD_position", "repeat_header"))

  }
  print(t)
  i <- i + 1
}
```

Table 82: Contingency table between death and Sexo

	Sexo		
death	0	1	Total
0	6317 (84%)	6909 (82%)	13226
1	1247 (16%)	1551 (18%)	2798
Total	7564 (100%)	8460 (100%)	16024

Table 83: Contingency table between death and Doença cardíaca

	Doença cardíaca				
death	0	1	2	NA	Total
0	7687 (83%)	913 (78%)	2950 (84%)	1676 (82%)	13226
1	1597 (17%)	259 (22%)	581 (16%)	361 (18%)	2798
Total	9284 (100%)	1172 (100%)	3531 (100%)	2037 (100%)	16024

Table 84: Contingency table between death and Hipertensão arterial

	Hipertensão arterial		
death	0	1	Total
0	9922 (82%)	3304 (85%)	13226
1	2218 (18%)	580 (15%)	2798
Total	12140 (100%)	3884 (100%)	16024

Table 85: Contingency table between death and Infarto do miocárdio prévio / Doença arterial coronariana

	Infarto do miocárdio prévio / Doença arterial coronariana		
death	0	1	Total
0	12061 (83%)	1165 (79%)	13226
1	2485 (17%)	313 (21%)	2798
Total	14546 (100%)	1478 (100%)	16024

Table 86: Contingency table between death and Insuficiência cardíaca

	Insuficiência cardíaca		
death	0	1	Total
0	8554 (84%)	4672 (80%)	13226
1	1652 (16%)	1146 (20%)	2798
Total	10206 (100%)	5818 (100%)	16024

Table 87: Contingency table between death and Fibrilação / flutter atrial

	Fibrilação / flutter atrial		
death	0	1	Total
0	11287 (83%)	1939 (80%)	13226
1	2321 (17%)	477 (20%)	2798
Total	13608 (100%)	2416 (100%)	16024

Table 88: Contingency table between death and Parada cardíaca prévia/ Taquicardia ventricular instável

	Parada cardíaca prévia/ Taquicardia ventricular instável		
death	0	1	Total
0	11643 (83%)	1583 (82%)	13226
1	2461 (17%)	337 (18%)	2798
Total	14104 (100%)	1920 (100%)	16024

Table 89: Contingency table between death and Transplante cardíaco prévio

	Transplante cardíaco prévio		
death	0	1	Total
0	13216 (83%)	10 (77%)	13226
1	2795 (17%)	3 (23%)	2798
Total	16011 (100%)	13 (100%)	16024

Table 90: Contingency table between death and Valvopatias/ Prótese valvares

	Valvopatias/ Prótese valvares		
death	0	1	Total
0	12397 (83%)	829 (77%)	13226
1	2551 (17%)	247 (23%)	2798
Total	14948 (100%)	1076 (100%)	16024

Table 91: Contingency table between death and Endocardite prévia

	Endocardite prévia		
death	0	1	Total
0	13120 (83%)	106 (77%)	13226
1	2766 (17%)	32 (23%)	2798
Total	15886 (100%)	138 (100%)	16024

Table 92: Contingency table between death and Diabetes melittus

	Diabetes melittus		
death	0	1	Total
0	11632 (83%)	1594 (82%)	13226
1	2447 (17%)	351 (18%)	2798
Total	14079 (100%)	1945 (100%)	16024

Table 93: Contingency table between death and Insuficiência renal crônica

	Insuficiência renal crônica		
death	0	1	Total
0	12762 (83%)	464 (71%)	13226
1	2612 (17%)	186 (29%)	2798
Total	15374 (100%)	650 (100%)	16024

Table 94: Contingency table between death and Hemodiálise

	Hemodiálise		
death	0	1	Total
0	13217 (83%)	9 (41%)	13226
1	2785 (17%)	13 (59%)	2798
Total	16002 (100%)	22 (100%)	16024

Table 95: Contingency table between death and Acidente Vascular Cerebral/ Acidente isquêmico transitório prévios

	Acidente Vascular Cerebral/ Acidente isquêmico transitório prévios		
death	0	1	Total
0	12814 (83%)	412 (81%)	13226
1	2704 (17%)	94 (19%)	2798
Total	15518 (100%)	506 (100%)	16024

Table 96: Contingency table between death and Doença pulmonar obstrutiva crônica

	Doença pulmonar obstrutiva crônica		
death	0	1	Total
0	13047 (83%)	179 (82%)	13226
1	2758 (17%)	40 (18%)	2798
Total	15805 (100%)	219 (100%)	16024

Table 97: Contingency table between death and Neoplasia em tratamento ou tratada recentemente (12 meses)

	Neoplasia em tratamento ou tratada recentemente (12 meses)		
death	0	1	Total
0	13141 (83%)	85 (74%)	13226
1	2768 (17%)	30 (26%)	2798
Total	15909 (100%)	115 (100%)	16024

Table 98: Contingency table between death and Tipo de Procedimento 1

	Tipo de Procedimento 1		
death	1	2	Total
0	9219 (83%)	4007 (82%)	13226
1	1910 (17%)	888 (18%)	2798
Total	11129 (100%)	4895 (100%)	16024

Table 99: Contingency table between death and Tipo de Reoperação 1

	Tipo de Reoperação 1				
death	1	2	3	NA	Total
0	3202 (82%)	776 (83%)	29 (85%)	9219 (83%)	13226
1	726 (18%)	157 (17%)	5 (15%)	1910 (17%)	2798
Total	3928 (100%)	933 (100%)	34 (100%)	11129 (100%)	16024

Table 100: Contingency table between death and Tipo de Dispositivo ao final do procedimento 1

	Tipo de Dispositivo ao final do procedimento 1				
death	1	2	3	4	Total
0	10417 (84%)	1483 (83%)	998 (77%)	328 (71%)	13226
1	2058 (16%)	308 (17%)	300 (23%)	132 (29%)	2798
Total	12475 (100%)	1791 (100%)	1298 (100%)	460 (100%)	16024

Table 101: Contingency table between death and Óbito intraoperatório 1

	Óbito intraoperatório 1		
death	0	1	Total
0	13226 (83%)	0 (0%)	13226
1	2791 (17%)	7 (100%)	2798
Total	16017 (100%)	7 (100%)	16024

Table 102: Contingency table between death and Tipo de Reoperação 2

	Tipo de Reoperação 2				
death	1	2	3	NA	Total
0	2911 (89%)	1222 (82%)	97 (80%)	8996 (81%)	13226
1	349 (11%)	271 (18%)	24 (20%)	2154 (19%)	2798
Total	3260 (100%)	1493 (100%)	121 (100%)	11150 (100%)	16024

Table 103: Contingency table between death and Tipo de Dispositivo ao final do procedimento 2

	Tipo de Dispositivo ao final do procedimento 2					
death	1	2	3	4	NA	Total
0	3243 (89%)	547 (85%)	313 (81%)	129 (64%)	8994 (81%)	13226
1	395 (11%)	98 (15%)	75 (19%)	74 (36%)	2156 (19%)	2798
Total	3638 (100%)	645 (100%)	388 (100%)	203 (100%)	11150 (100%)	16024

Table 104: Contingency table between death and Óbito intraoperatório 2

	Óbito intraoperatório 2		
death	0	NA	Total
0	4238 (87%)	8988 (81%)	13226
1	643 (13%)	2155 (19%)	2798
Total	4881 (100%)	11143 (100%)	16024

Table 105: Contingency table between death and Tipo de Reoperação 3

	Tipo de Reoperação 3				
death	1	2	3	NA	Total
0	649 (90%)	475 (82%)	45 (73%)	12057 (82%)	13226
1	75 (10%)	105 (18%)	17 (27%)	2601 (18%)	2798
Total	724 (100%)	580 (100%)	62 (100%)	14658 (100%)	16024

Table 106: Contingency table between death and Tipo de Dispositivo ao final do procedimento 3

	Tipo de Dispositivo ao final do procedimento 3					
death	1	2	3	4	NA	Total
0	863 (89%)	216 (86%)	123 (77%)	61 (62%)	11963 (82%)	13226
1	105 (11%)	36 (14%)	37 (23%)	38 (38%)	2582 (18%)	2798
Total	968 (100%)	252 (100%)	160 (100%)	99 (100%)	14545 (100%)	16024

Table 107: Contingency table between death and Óbito intraoperatório 3

	Óbito intraoperatório 3			
death	0	1	NA	Total
0	1264 (86%)	0 (0%)	11962 (82%)	13226
1	212 (14%)	4 (100%)	2582 (18%)	2798
Total	1476 (100%)	4 (100%)	14544 (100%)	16024

Table 108: Contingency table between death and Tipo de Reoperação 4

	Tipo de Reoperação 4				
death	1	2	3	NA	Total
0	168 (88%)	200 (80%)	31 (94%)	12827 (82%)	13226
1	24 (12%)	51 (20%)	2 (6%)	2721 (18%)	2798
Total	192 (100%)	251 (100%)	33 (100%)	15548 (100%)	16024

Table 109: Contingency table between death and Tipo de Dispositivo ao final do procedimento 4

	Tipo de Dispositivo ao final do procedimento 4					
death	1	2	3	4	NA	Total
0	253 (88%)	94 (85%)	31 (69%)	28 (67%)	12820 (83%)	13226
1	35 (12%)	16 (15%)	14 (31%)	14 (33%)	2719 (17%)	2798
Total	288 (100%)	110 (100%)	45 (100%)	42 (100%)	15539 (100%)	16024

Table 110: Contingency table between death and Óbito intraoperatório 4

	Óbito intraoperatório 4		
death	0	NA	Total
0	406 (84%)	12820 (83%)	13226
1	79 (16%)	2719 (17%)	2798
Total	485 (100%)	15539 (100%)	16024

Table 111: Contingency table between death and Tipo de Reoperação 5

	Tipo de Reoperação 5				
death	1	2	3	NA	Total
0	58 (82%)	83 (78%)	12 (86%)	13073 (83%)	13226
1	13 (18%)	23 (22%)	2 (14%)	2760 (17%)	2798
Total	71 (100%)	106 (100%)	14 (100%)	15833 (100%)	16024

Table 112: Contingency table between death and Tipo de Dispositivo ao final do procedimento 5

	Tipo de Dispositivo ao final do procedimento 5					
death	1	2	3	4	NA	Total
0	86 (86%)	46 (82%)	15 (68%)	6 (46%)	13073 (83%)	13226
1	14 (14%)	10 (18%)	7 (32%)	7 (54%)	2760 (17%)	2798
Total	100 (100%)	56 (100%)	22 (100%)	13 (100%)	15833 (100%)	16024

Table 113: Contingency table between death and Óbito intraoperatório 5

	Óbito intraoperatório 5		
death	0	NA	Total
0	154 (80%)	13072 (83%)	13226
1	38 (20%)	2760 (17%)	2798
Total	192 (100%)	15832 (100%)	16024

Table 114: Contingency table between death and Tipo de Reoperação 6

	Tipo de Reoperação 6				
death	1	2	3	NA	Total
0	20 (77%)	35 (76%)	4 (67%)	13167 (83%)	13226
1	6 (23%)	11 (24%)	2 (33%)	2779 (17%)	2798
Total	26 (100%)	46 (100%)	6 (100%)	15946 (100%)	16024

Table 115: Contingency table between death and Tipo de Dispositivo ao final do procedimento 6

	Tipo de Dispositivo ao final do procedimento 6					
death	1	2	3	4	NA	Total
0	35 (88%)	20 (80%)	3 (43%)	4 (44%)	13164 (83%)	13226
1	5 (12%)	5 (20%)	4 (57%)	5 (56%)	2779 (17%)	2798
Total	40 (100%)	25 (100%)	7 (100%)	9 (100%)	15943 (100%)	16024

Table 116: Contingency table between death and Óbito intraoperatório 6

	Óbito intraoperatório 6		
death	0	NA	Total
0	62 (77%)	13164 (83%)	13226
1	19 (23%)	2779 (17%)	2798
Total	81 (100%)	15943 (100%)	16024

Table 117: Contingency table between death and Tipo de Reoperação 7

	Tipo de Reoperação 7				
death	1	2	3	NA	Total
0	8 (80%)	16 (89%)	3 (75%)	13199 (83%)	13226
1	2 (20%)	2 (11%)	1 (25%)	2793 (17%)	2798
Total	10 (100%)	18 (100%)	4 (100%)	15992 (100%)	16024

Table 118: Contingency table between death and Tipo de Dispositivo ao final do procedimento 7

	Tipo de Dispositivo ao final do procedimento 7					
death	1	2	3	4	NA	Total
0	12 (92%)	12 (92%)	0 (0%)	3 (75%)	13199 (83%)	13226
1	1 (8%)	1 (8%)	1 (100%)	1 (25%)	2794 (17%)	2798
Total	13 (100%)	13 (100%)	1 (100%)	4 (100%)	15993 (100%)	16024

Table 119: Contingency table between death and Óbito intraoperatório 7

	Óbito intraoperatório 7		
death	0	NA	Total
0	27 (84%)	13199 (83%)	13226
1	5 (16%)	2793 (17%)	2798
Total	32 (100%)	15992 (100%)	16024

Table 120: Contingency table between death and Tipo de Reoperação 8

	Tipo de Reoperação 8		
death	TRUE	NA	Total
0	9 (75%)	13217 (83%)	13226
1	3 (25%)	2795 (17%)	2798
Total	12 (100%)	16012 (100%)	16024

Table 121: Contingency table between death and Tipo de Dispositivo ao final do procedimento 8

	Tipo de Dispositivo ao final do procedimento 8		
death	TRUE	NA	Total
0	9 (75%)	13217 (83%)	13226
1	3 (25%)	2795 (17%)	2798
Total	12 (100%)	16012 (100%)	16024

Table 122: Contingency table between death and Óbito intraoperatório 8

	Óbito intraoperatório 8		
death	FALSE	NA	Total
0	9 (75%)	13217 (83%)	13226
1	3 (25%)	2795 (17%)	2798
Total	12 (100%)	16012 (100%)	16024

Table 123: Contingency table between death and Tipo de Reoperação 9

	Tipo de Reoperação 9		
death	TRUE	NA	Total
0	4 (80%)	13222 (83%)	13226
1	1 (20%)	2797 (17%)	2798
Total	5 (100%)	16019 (100%)	16024

Table 124: Contingency table between death and Tipo de Dispositivo ao final do procedimento 9

	Tipo de Dispositivo ao final do procedimento 9		
death	TRUE	NA	Total
0	4 (80%)	13222 (83%)	13226
1	1 (20%)	2797 (17%)	2798
Total	5 (100%)	16019 (100%)	16024

Table 125: Contingency table between death and Óbito intraoperatório 9

	Óbito intraoperatório 9		
death	FALSE	NA	Total
0	4 (80%)	13222 (83%)	13226
1	1 (20%)	2797 (17%)	2798
Total	5 (100%)	16019 (100%)	16024

Table 126: Contingency table between death and Tipo de Reoperação 10

	Tipo de Reoperação 10		
death	TRUE	NA	Total
0	1 (100%)	13225 (83%)	13226
1	0 (0%)	2798 (17%)	2798
Total	1 (100%)	16023 (100%)	16024

Table 127: Contingency table between death and Tipo de Dispositivo ao final do procedimento 10

	Tipo de Dispositivo ao final do procedimento 10		
death	TRUE	NA	Total
0	1 (100%)	13225 (83%)	13226
1	0 (0%)	2798 (17%)	2798
Total	1 (100%)	16023 (100%)	16024

Table 128: Contingency table between death and Óbito intraoperatório 10

	Óbito intraoperatório 10		
death	FALSE	NA	Total
0	1 (100%)	13225 (83%)	13226
1	0 (0%)	2798 (17%)	2798
Total	1 (100%)	16023 (100%)	16024

Table 129: Contingency table between death and Mudança do tipo de DCEI: entre o Procedimento 1 e Procedimento 2

	Mudança do tipo de DCEI: entre o Procedimento 1 e Procedimento 2			
death	0	1	NA	Total
0	4025 (88%)	207 (74%)	8994 (81%)	13226
1	569 (12%)	73 (26%)	2156 (19%)	2798
Total	4594 (100%)	280 (100%)	11150 (100%)	16024

Table 130: Contingency table between death and Mudança do tipo de DCEI: entre o Procedimento 2 e Procedimento 3

	Mudança do tipo de DCEI: entre o Procedimento 2 e Procedimento 3			
death	0	1	NA	Total
0	1192 (86%)	71 (76%)	11963 (82%)	13226
1	193 (14%)	23 (24%)	2582 (18%)	2798
Total	1385 (100%)	94 (100%)	14545 (100%)	16024

Table 131: Contingency table between death and Mudança do tipo de DCEI: entre o Procedimento 3 e Procedimento 4

	Mudança do tipo de DCEI: entre o Procedimento 3 e Procedimento 4			
death	0	1	NA	Total
0	384 (84%)	22 (79%)	12820 (83%)	13226
1	73 (16%)	6 (21%)	2719 (17%)	2798
Total	457 (100%)	28 (100%)	15539 (100%)	16024

Table 132: Contingency table between death and Mudança do tipo de DCEI: entre o Procedimento 4 e Procedimento 5

	Mudança do tipo de DCEI: entre o Procedimento 4 e Procedimento 5			
death	0	1	NA	Total
0	149 (82%)	4 (44%)	13073 (83%)	13226
1	33 (18%)	5 (56%)	2760 (17%)	2798
Total	182 (100%)	9 (100%)	15833 (100%)	16024

Table 133: Contingency table between death and Mudança do tipo de DCEI: entre o Procedimento 5 e Procedimento 6

	Mudança do tipo de DCEI: entre o Procedimento 5 e Procedimento 6			
death	0	1	NA	Total
0	59 (80%)	3 (43%)	13164 (83%)	13226
1	15 (20%)	4 (57%)	2779 (17%)	2798
Total	74 (100%)	7 (100%)	15943 (100%)	16024

Table 134: Contingency table between death and Mudança do tipo de DCEI: entre o Procedimento 6 e Procedimento 7

	Mudança do tipo de DCEI: entre o Procedimento 6 e Procedimento 7			
death	0	1	NA	Total
0	25 (89%)	2 (67%)	13199 (83%)	13226
1	3 (11%)	1 (33%)	2794 (17%)	2798
Total	28 (100%)	3 (100%)	15993 (100%)	16024

Table 135: Contingency table between death and Mudança do tipo de DCEI: entre o Procedimento 7 e Procedimento 8

	Mudança do tipo de DCEI: entre o Procedimento 7 e Procedimento 8			
death	FALSE	TRUE	NA	Total
0	9 (82%)	0 (0%)	13217 (83%)	13226
1	2 (18%)	1 (100%)	2795 (17%)	2798
Total	11 (100%)	1 (100%)	16012 (100%)	16024

Table 136: Contingency table between death and Mudança do tipo de DCEI: entre o Procedimento 8 e Procedimento 9

	Mudança do tipo de DCEI: entre o Procedimento 8 e Procedimento 9		
death	FALSE	NA	Total
0	4 (80%)	13222 (83%)	13226
1	1 (20%)	2797 (17%)	2798
Total	5 (100%)	16019 (100%)	16024

Table 137: Contingency table between death and Mudança do tipo de DCEI: entre o Procedimento 9 e Procedimento 10

	Mudança do tipo de DCEI: entre o Procedimento 9 e Procedimento 10		
death	FALSE	NA	Total
0	1 (100%)	13225 (83%)	13226
1	0 (0%)	2798 (17%)	2798
Total	1 (100%)	16023 (100%)	16024

Table 138: Contingency table between death and Diálise durante os episódios de hospitalização

	Diálise durante os episódios de hospitalização		
death	0	1	Total
0	13209 (83%)	17 (28%)	13226
1	2754 (17%)	44 (72%)	2798
Total	15963 (100%)	61 (100%)	16024

Table 139: Contingency table between death and UTI durante os episódios de hospitalização

	UTI durante os episódios de hospitalização		
death	0	1	Total
0	10762 (85%)	2464 (72%)	13226
1	1858 (15%)	940 (28%)	2798
Total	12620 (100%)	3404 (100%)	16024

Table 140: Contingency table between death and Admissão em até 180 dias antes da T0

	Admissão em até 180 dias antes da T0		
death	0	1	Total
0	12427 (83%)	799 (72%)	13226
1	2482 (17%)	316 (28%)	2798
Total	14909 (100%)	1115 (100%)	16024

Table 141: Contingency table between death and Readmissões pós-T0 com diálise

	Readmissões pós-T0 com diálise				
death	0	1	2	3	Total
0	13220 (83%)	5 (26%)	1 (50%)	0 (0%)	13226
1	2782 (17%)	14 (74%)	1 (50%)	1 (100%)	2798
Total	16002 (100%)	19 (100%)	2 (100%)	1 (100%)	16024

Table 142: Contingency table between death and Desfecho principal da admissão T0

	Desfecho principal da admissão T0		
death	0	1	Total
0	13226 (84%)	0 (0%)	13226
1	2540 (16%)	258 (100%)	2798
Total	15766 (100%)	258 (100%)	16024

Table 143: Contingency table between death and Readmissão cirúrgica em até 30 dias

	Readmissão cirúrgica em até 30 dias		
death	0	1	Total
0	13116 (83%)	110 (80%)	13226
1	2771 (17%)	27 (20%)	2798
Total	15887 (100%)	137 (100%)	16024

Table 144: Contingency table between death and Readmissão cirúrgica entre 31 a 60 dias

	Readmissão cirúrgica entre 31 a 60 dias		
death	0	1	Total
0	13152 (83%)	74 (80%)	13226
1	2779 (17%)	19 (20%)	2798
Total	15931 (100%)	93 (100%)	16024

Table 145: Contingency table between death and Readmissão cirúgica entre 61 a 180 dias

	Readmissão cirúgica entre 61 a 180 dias		
death	0	1	Total
0	13103 (83%)	123 (83%)	13226
1	2772 (17%)	26 (17%)	2798
Total	15875 (100%)	149 (100%)	16024

Table 146: Contingency table between death and Readmissão cirúrgica em até 1 ano

	Readmissão cirúrgica em até 1 ano		
death	0	1	Total
0	13119 (83%)	107 (81%)	13226
1	2773 (17%)	25 (19%)	2798
Total	15892 (100%)	132 (100%)	16024

Table 147: Contingency table between death and Desfecho final do estudo

	Desfecho final do estudo			
death	1	2	3	Total
0	0 (0%)	7729 (100%)	5497 (100%)	13226
1	2798 (100%)	0 (0%)	0 (0%)	2798
Total	2798 (100%)	7729 (100%)	5497 (100%)	16024

Table 148: Contingency table between death and Ventilação mecânica / IOT

	Ventilação mecânica / IOT		
death	1	NA	Total
0	2411 (81%)	10815 (83%)	13226
1	573 (19%)	2225 (17%)	2798
Total	2984 (100%)	13040 (100%)	16024