An analysis of the ‘community involvement statements’ published in *Autism*

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2023-10-13

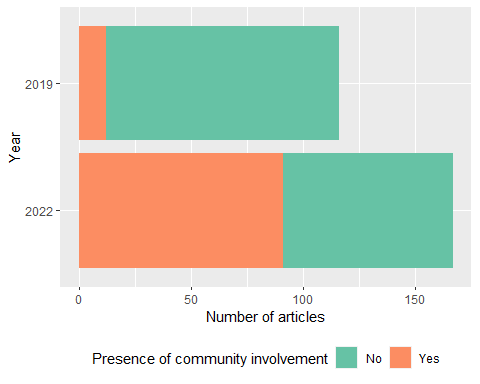
## Preliminary analysis

#### This report provides an overview of results generated from a preliminary analysis. This dataset includes information obtained from **283 journal articles** (excluding Perspectives, Commentaries and Editorials; n = 16) published in Autism in the year 2019 (two years before community involvement statements were made mandatory) or 2022 (two years after statements were made mandatory).

##### **1) Frequency of reporting**

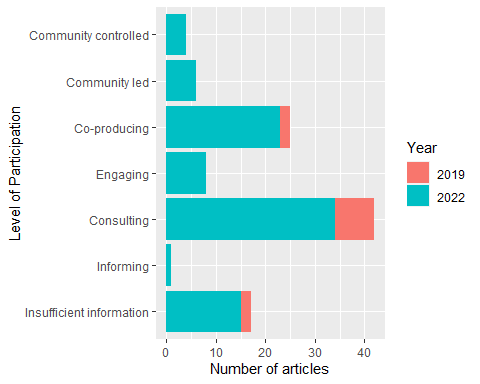
Between 1 Jan 2019 and 31 Dec 2019, *Autism* published **116 research papers**. **12 of which (10.3%)** included information on community involvement activity. Between 1 Jan 2022 and 31 Dec 2022, following the introduction of the mandatory reporting of community involvement policy in Jan 2021, *Autism* published **167 research papers**. **90 of which (53.9%)** included information on community involvement activity.

yearCommInv <- fulldata %>%  
 select("yearPub", "commInvPresence")  
  
pubCountTotal <- yearCommInv %>%   
 group\_by(yearPub) %>%  
 count()  
  
pubByCommInv <- yearCommInv %>%   
 group\_by(yearPub) %>%  
 filter(commInvPresence == "Yes") %>%  
 count()  
  
yearCommInv <- as.data.frame(table(yearCommInv))  
  
freqBarChart <- ggplot(yearCommInv, aes(x = fct\_relevel(yearPub, c("2022", "2019")), y = Freq, fill = fct\_relevel(commInvPresence, c("No", "Yes")))) +  
 geom\_col() +  
 labs(x = "Year",  
 y = "Number of articles",  
 fill = "Presence of community involvement") +  
 scale\_fill\_brewer(palette = "Set2") +  
 theme(legend.position = "bottom") +  
 coord\_flip()  
  
freqBarChart



##### **2) Type of community involvement report**

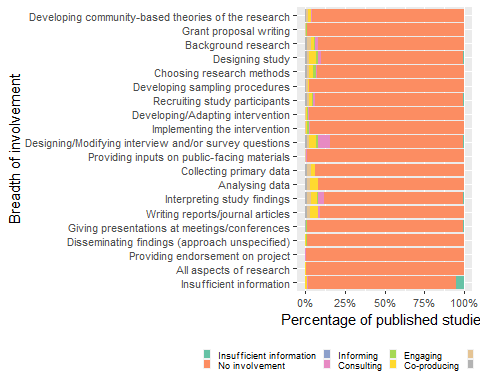
partdata <- fulldata %>%  
 filter(commInvPresence == "Yes") %>%  
 select("levelOfPart", "yearPub")  
  
partdata <- as.data.frame(table(partdata))  
  
partBarChart <- ggplot(partdata, aes(fill = yearPub, x = fct\_relevel(levelOfPart, c("Insufficient information", "Informing", "Consulting", "Engaging", "Co-producing", "Community led", "Community controlled")), y = Freq)) +  
 geom\_col(position = "stack") +  
 labs(x = "Level of Participation",  
 y = "Number of articles",  
 fill = "Year") +  
 coord\_flip()  
  
partBarChart



##### **3) Breadth of Community Involvement (OVERALL)**

Based on detailed coding scheme for the breadth of community involvement.

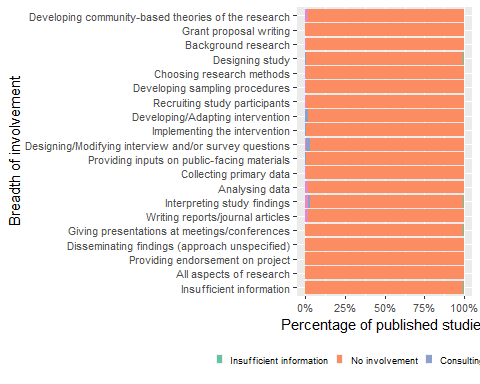
breadthdata <- fulldata %>%  
 select(PMID, c("Developing community-based theories of the research":"Insufficient information"))  
  
#pivot wide to long  
  
breadthdatalong <- breadthdata %>%  
 pivot\_longer(cols = c("Developing community-based theories of the research",   
 "Grant proposal writing",   
 "Background research",   
 "Designing study",   
 "Choosing research methods",   
 "Developing sampling procedures",   
 "Recruiting study participants",   
 "Developing/Adapting intervention",   
 "Implementing the intervention",   
 "Designing/Modifying interview and/or survey questions",  
 "Providing inputs on public-facing materials",   
 "Collecting primary data",   
 "Analysing data",   
 "Interpreting study findings",   
 "Writing reports/journal articles",   
 "Giving presentations at meetings/conferences",  
 "Disseminating findings (approach unspecified)",  
 "Providing endorsement on project",   
 "All aspects of research",   
 "Insufficient information"),  
 names\_to = "Breadth of Involvement",  
 values\_to = "Level of Participation")   
  
#create cross table to calculate number of articles for each breadth of involvement broken down by level of participation  
breadthparttab <- crosstable(breadthdatalong, "Breadth of Involvement", by = "Level of Participation",  
 percent\_pattern = "{n}")   
breadthparttab <- as.data.frame(breadthparttab)  
  
breathpartlong <- breadthparttab %>%  
 pivot\_longer(cols = c("No involvement", "Informing", "Consulting", "Engaging", "Co-producing", "Community led", "Community controlled", "Insufficient information"),  
 names\_to = "levelOfPart",  
 values\_to = "Count") %>%  
 select(c("variable", "levelOfPart", "Count")) %>%  
 rename("breadthOfPart" = "variable")  
  
breathpartlong$Count <- as.numeric(breathpartlong$Count)  
  
#create stacked percent bar chart  
breadthBarChart <- ggplot(breathpartlong, aes(x = fct\_relevel(breadthOfPart, c("Insufficient information", "All aspects of research", "Providing endorsement on project", "Disseminating findings (approach unspecified)", "Giving presentations at meetings/conferences", "Writing reports/journal articles", "Interpreting study findings", "Analysing data", "Collecting primary data", "Providing inputs on public-facing materials", "Designing/Modifying interview and/or survey questions", "Implementing the intervention", "Developing/Adapting intervention", "Recruiting study participants", "Developing sampling procedures", "Choosing research methods", "Designing study", "Background research", "Grant proposal writing", "Developing community-based theories of the research")), y = Count, fill = fct\_relevel(levelOfPart, c("Insufficient information", "No involvement", "Informing", "Consulting", "Engaging", "Co-producing", "Community led", "Community controlled")))) +  
 geom\_bar(position = "fill", stat = "identity") +  
 theme(legend.position = "bottom",   
 legend.text = element\_text(size = 7),  
 legend.key.size = unit(.2, "cm"),  
 axis.text.y = element\_text(size = 8),  
 axis.text.x = element\_text(size = 8)) +  
 labs(x = "Breadth of involvement",  
 y = "Percentage of published studies",  
 fill = "") +  
 scale\_y\_continuous(labels = scales::percent) +  
 scale\_fill\_brewer(palette = "Set2") +  
 coord\_flip()  
  
breadthBarChart



##### **3a) Breadth of Community Involvement (2019)**

Based on detailed coding scheme for the breadth of community involvement.

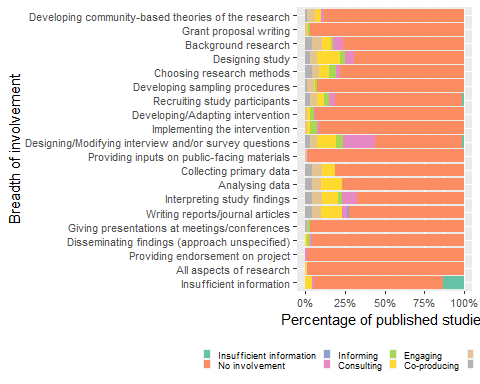
breadthdata <- fulldata %>%  
 filter(yearPub == 2019) %>%  
 select(PMID, c("Developing community-based theories of the research":"Insufficient information"))  
  
#pivot wide to long  
  
breadthdatalong <- breadthdata %>%  
 pivot\_longer(cols = c("Developing community-based theories of the research",   
 "Grant proposal writing",   
 "Background research",   
 "Designing study",   
 "Choosing research methods",   
 "Developing sampling procedures",   
 "Recruiting study participants",   
 "Developing/Adapting intervention",   
 "Implementing the intervention",   
 "Designing/Modifying interview and/or survey questions",  
 "Providing inputs on public-facing materials",   
 "Collecting primary data",   
 "Analysing data",   
 "Interpreting study findings",   
 "Writing reports/journal articles",   
 "Giving presentations at meetings/conferences",  
 "Disseminating findings (approach unspecified)",  
 "Providing endorsement on project",   
 "All aspects of research",   
 "Insufficient information"),  
 names\_to = "Breadth of Involvement",  
 values\_to = "Level of Participation")   
  
#create cross table to calculate number of articles for each breadth of involvement broken down by level of participation  
breadthparttab <- crosstable(breadthdatalong, "Breadth of Involvement", by = "Level of Participation",  
 percent\_pattern = "{n}")   
breadthparttab <- as.data.frame(breadthparttab)  
  
breathpartlong <- breadthparttab %>%  
 pivot\_longer(cols = c("No involvement", "Consulting", "Co-producing", "Insufficient information"),  
 names\_to = "levelOfPart",  
 values\_to = "Count") %>%  
 select(c("variable", "levelOfPart", "Count")) %>%  
 rename("breadthOfPart" = "variable")  
  
breathpartlong$Count <- as.numeric(breathpartlong$Count)  
  
#create stacked percent bar chart  
breadthBarChart <- ggplot(breathpartlong, aes(x = fct\_relevel(breadthOfPart, c("Insufficient information", "All aspects of research", "Providing endorsement on project", "Disseminating findings (approach unspecified)", "Giving presentations at meetings/conferences", "Writing reports/journal articles", "Interpreting study findings", "Analysing data", "Collecting primary data", "Providing inputs on public-facing materials", "Designing/Modifying interview and/or survey questions", "Implementing the intervention", "Developing/Adapting intervention", "Recruiting study participants", "Developing sampling procedures", "Choosing research methods", "Designing study", "Background research", "Grant proposal writing", "Developing community-based theories of the research")), y = Count, fill = fct\_relevel(levelOfPart, c("Insufficient information", "No involvement", "Consulting", "Co-producing")))) +  
 geom\_bar(position = "fill", stat = "identity") +  
 theme(legend.position = "bottom",   
 legend.text = element\_text(size = 7),  
 legend.key.size = unit(.2, "cm"),  
 axis.text.y = element\_text(size = 8),  
 axis.text.x = element\_text(size = 8)) +  
 labs(x = "Breadth of involvement",  
 y = "Percentage of published studies",  
 fill = "") +  
 scale\_y\_continuous(labels = scales::percent) +  
 scale\_fill\_brewer(palette = "Set2") +  
 coord\_flip()  
  
breadthBarChart



##### **3b) Breadth of Community Involvement (2022)**

Based on detailed coding scheme for the breadth of community involvement.

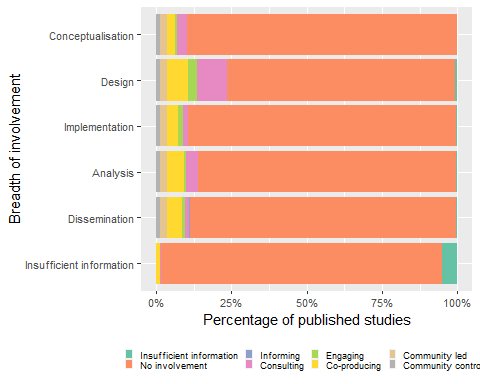
breadthdata <- fulldata %>%  
 filter(yearPub == 2022) %>%  
 filter(commInvPresence == "Yes") %>%  
 select(PMID, c("Developing community-based theories of the research":"Insufficient information"))  
  
#pivot wide to long  
  
breadthdatalong <- breadthdata %>%  
 pivot\_longer(cols = c("Developing community-based theories of the research",   
 "Grant proposal writing",   
 "Background research",   
 "Designing study",   
 "Choosing research methods",   
 "Developing sampling procedures",   
 "Recruiting study participants",   
 "Developing/Adapting intervention",   
 "Implementing the intervention",   
 "Designing/Modifying interview and/or survey questions",  
 "Providing inputs on public-facing materials",   
 "Collecting primary data",   
 "Analysing data",   
 "Interpreting study findings",   
 "Writing reports/journal articles",   
 "Giving presentations at meetings/conferences",  
 "Disseminating findings (approach unspecified)",  
 "Providing endorsement on project",   
 "All aspects of research",   
 "Insufficient information"),  
 names\_to = "Breadth of Involvement",  
 values\_to = "Level of Participation")   
  
#create cross table to calculate number of articles for each breadth of involvement broken down by level of participation  
breadthparttab <- crosstable(breadthdatalong, "Breadth of Involvement", by = "Level of Participation",  
 percent\_pattern = "{n}")   
breadthparttab <- as.data.frame(breadthparttab)  
  
breathpartlong <- breadthparttab %>%  
 pivot\_longer(cols = c("No involvement", "Informing", "Consulting", "Engaging", "Co-producing", "Community led", "Community controlled", "Insufficient information"),  
 names\_to = "levelOfPart",  
 values\_to = "Count") %>%  
 select(c("variable", "levelOfPart", "Count")) %>%  
 rename("breadthOfPart" = "variable")  
  
breathpartlong$Count <- as.numeric(breathpartlong$Count)  
  
#create stacked percent bar chart  
breadthBarChart <- ggplot(breathpartlong, aes(x = fct\_relevel(breadthOfPart, c("Insufficient information", "All aspects of research", "Providing endorsement on project", "Disseminating findings (approach unspecified)", "Giving presentations at meetings/conferences", "Writing reports/journal articles", "Interpreting study findings", "Analysing data", "Collecting primary data", "Providing inputs on public-facing materials", "Designing/Modifying interview and/or survey questions", "Implementing the intervention", "Developing/Adapting intervention", "Recruiting study participants", "Developing sampling procedures", "Choosing research methods", "Designing study", "Background research", "Grant proposal writing", "Developing community-based theories of the research")), y = Count, fill = fct\_relevel(levelOfPart, c("Insufficient information", "No involvement", "Informing", "Consulting", "Engaging", "Co-producing", "Community led", "Community controlled")))) +  
 geom\_bar(position = "fill", stat = "identity") +  
 theme(legend.position = "bottom",   
 legend.text = element\_text(size = 7),  
 legend.key.size = unit(.2, "cm"),  
 axis.text.y = element\_text(size = 8),  
 axis.text.x = element\_text(size = 8)) +  
 labs(x = "Breadth of involvement",  
 y = "Percentage of published studies",  
 fill = "") +  
 scale\_y\_continuous(labels = scales::percent) +  
 scale\_fill\_brewer(palette = "Set2") +  
 coord\_flip()  
  
breadthBarChart



##### **4) Breadth of Community Involvement (OVERALL)**

Based on broad coding scheme for the breadth of community involvement.

breadthbroaddata <- fulldata %>%  
 select(PMID, c("Conceptualisation":"Insufficient information"))  
  
#pivot wide to long  
  
breadthbroadlong <- breadthbroaddata %>%  
 pivot\_longer(cols = c("Conceptualisation",  
 "Design",  
 "Implementation",  
 "Analysis",  
 "Dissemination",  
 "Insufficient information"),  
 names\_to = "Breadth of Involvement",  
 values\_to = "Level of Participation")   
  
#create cross table to calculate number of articles for each breadth of involvement broken down by level of participation  
breadthbroadtab <- crosstable(breadthbroadlong, "Breadth of Involvement", by = "Level of Participation",  
 percent\_pattern = "{n}")   
breadthbroadtab <- as.data.frame(breadthbroadtab)  
  
breathbroadtablong <- breadthbroadtab %>%  
 pivot\_longer(cols = c("No involvement", "Informing", "Consulting", "Engaging", "Co-producing", "Community led", "Community controlled", "Insufficient information"),  
 names\_to = "levelOfPart",  
 values\_to = "Count") %>%  
 select(c("variable", "levelOfPart", "Count")) %>%  
 rename("breadthOfPart" = "variable")  
  
breathbroadtablong$Count <- as.numeric(breathbroadtablong$Count)  
  
#create stacked percent bar chart  
breadthBroadBarChart <- ggplot(breathbroadtablong, aes(x = fct\_relevel(breadthOfPart,c("Insufficient information", "Dissemination", "Analysis", "Implementation", "Design", "Conceptualisation")), y = Count, fill = fct\_relevel(levelOfPart, c("Insufficient information", "No involvement", "Informing", "Consulting", "Engaging", "Co-producing", "Community led", "Community controlled")))) +  
 geom\_bar(position = "fill", stat = "identity") +  
 theme(legend.position = "bottom",   
 legend.text = element\_text(size = 7),  
 legend.key.size = unit(.2, "cm"),  
 axis.text.y = element\_text(size = 8),  
 axis.text.x = element\_text(size = 8)) +  
 labs(x = "Breadth of involvement",  
 y = "Percentage of published studies",  
 fill = "") +  
 scale\_y\_continuous(labels = scales::percent) +  
 scale\_fill\_brewer(palette = "Set2") +  
 coord\_flip()  
  
breadthBroadBarChart

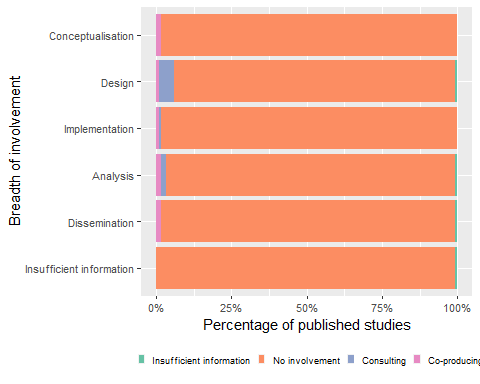


##### **4a) Breadth of Community Involvement (2019)**

Based on broad coding scheme for the breadth of community involvement for 2019 papers.

breadthbroaddata <- fulldata %>%  
 filter(yearPub == 2019) %>%  
 select(PMID, c("Conceptualisation":"Insufficient information"))  
  
#pivot wide to long  
  
breadthbroadlong <- breadthbroaddata %>%  
 pivot\_longer(cols = c("Conceptualisation",  
 "Design",  
 "Implementation",  
 "Analysis",  
 "Dissemination",  
 "Insufficient information"),  
 names\_to = "Breadth of Involvement",  
 values\_to = "Level of Participation")   
  
#create cross table to calculate number of articles for each breadth of involvement broken down by level of participation  
breadthbroadtab <- crosstable(breadthbroadlong, "Breadth of Involvement", by = "Level of Participation",  
 percent\_pattern = "{n}")   
breadthbroadtab <- as.data.frame(breadthbroadtab)  
  
breathbroadtablong <- breadthbroadtab %>%  
 pivot\_longer(cols = c("No involvement", "Consulting", "Co-producing", "Insufficient information"),  
 names\_to = "levelOfPart",  
 values\_to = "Count") %>%  
 select(c("variable", "levelOfPart", "Count")) %>%  
 rename("breadthOfPart" = "variable")  
  
breathbroadtablong$Count <- as.numeric(breathbroadtablong$Count)  
  
#create stacked percent bar chart  
breadthBroadBarChart <- ggplot(breathbroadtablong, aes(x = fct\_relevel(breadthOfPart,c("Insufficient information", "Dissemination", "Analysis", "Implementation", "Design", "Conceptualisation")), y = Count, fill = fct\_relevel(levelOfPart, c("Insufficient information", "No involvement", "Informing", "Consulting", "Engaging", "Co-producing", "Community led", "Community controlled")))) +  
 geom\_bar(position = "fill", stat = "identity") +  
 theme(legend.position = "bottom",   
 legend.text = element\_text(size = 7),  
 legend.key.size = unit(.2, "cm"),  
 axis.text.y = element\_text(size = 8),  
 axis.text.x = element\_text(size = 8)) +  
 labs(x = "Breadth of involvement",  
 y = "Percentage of published studies",  
 fill = "") +  
 scale\_y\_continuous(labels = scales::percent) +  
 scale\_fill\_brewer(palette = "Set2") +  
 coord\_flip()  
  
breadthBroadBarChart

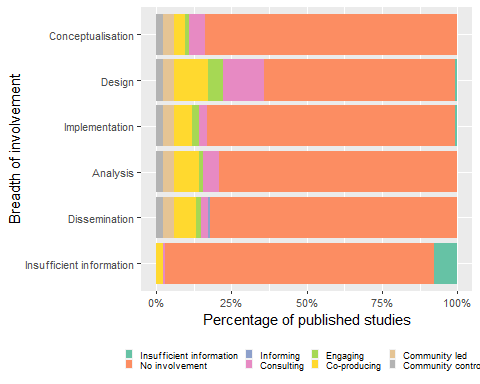
## Warning: 4 unknown levels in `f`: Informing, Engaging, Community led, and Community  
## controlled



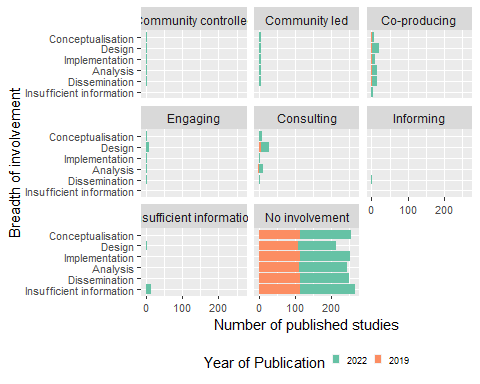
##### **4b) Breadth of Community Involvement (2022)**

Based on broad coding scheme for the breadth of community involvement for 2022 papers.

breadthbroaddata <- fulldata %>%  
 filter(yearPub == 2022) %>%  
 select(PMID, c("Conceptualisation":"Insufficient information"))  
  
#pivot wide to long  
  
breadthbroadlong <- breadthbroaddata %>%  
 pivot\_longer(cols = c("Conceptualisation",  
 "Design",  
 "Implementation",  
 "Analysis",  
 "Dissemination",  
 "Insufficient information"),  
 names\_to = "Breadth of Involvement",  
 values\_to = "Level of Participation")   
  
#create cross table to calculate number of articles for each breadth of involvement broken down by level of participation  
breadthbroadtab <- crosstable(breadthbroadlong, "Breadth of Involvement", by = "Level of Participation",  
 percent\_pattern = "{n}")   
breadthbroadtab <- as.data.frame(breadthbroadtab)  
  
breathbroadtablong <- breadthbroadtab %>%  
 pivot\_longer(cols = c("No involvement", "Informing", "Consulting", "Engaging", "Co-producing", "Community led", "Community controlled", "Insufficient information"),  
 names\_to = "levelOfPart",  
 values\_to = "Count") %>%  
 select(c("variable", "levelOfPart", "Count")) %>%  
 rename("breadthOfPart" = "variable")  
  
breathbroadtablong$Count <- as.numeric(breathbroadtablong$Count)  
  
#create stacked percent bar chart  
breadthBroadBarChart <- ggplot(breathbroadtablong, aes(x = fct\_relevel(breadthOfPart,c("Insufficient information", "Dissemination", "Analysis", "Implementation", "Design", "Conceptualisation")), y = Count, fill = fct\_relevel(levelOfPart, c("Insufficient information", "No involvement", "Informing", "Consulting", "Engaging", "Co-producing", "Community led", "Community controlled")))) +  
 geom\_bar(position = "fill", stat = "identity") +  
 theme(legend.position = "bottom",   
 legend.text = element\_text(size = 7),  
 legend.key.size = unit(.2, "cm"),  
 axis.text.y = element\_text(size = 8),  
 axis.text.x = element\_text(size = 8)) +  
 labs(x = "Breadth of involvement",  
 y = "Percentage of published studies",  
 fill = "") +  
 scale\_y\_continuous(labels = scales::percent) +  
 scale\_fill\_brewer(palette = "Set2") +  
 coord\_flip()  
  
breadthBroadBarChart

 #### ***4c) Panel diagram breadth x level of participation***

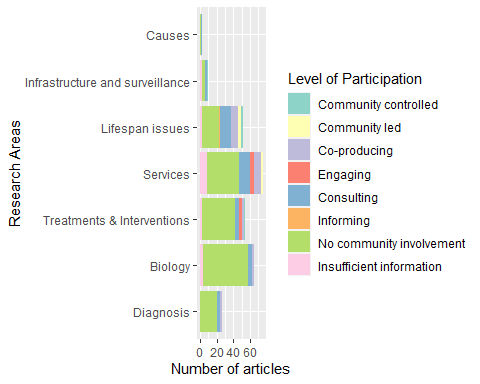
breadthbroaddata <- fulldata %>%  
 select(PMID, yearPub, c("Conceptualisation":"Insufficient information"))  
  
breadthbroadlong <- breadthbroaddata %>%  
 pivot\_longer(cols = c("Conceptualisation",  
 "Design",  
 "Implementation",  
 "Analysis",  
 "Dissemination",  
 "Insufficient information"),  
 names\_to = "Breadth of Involvement",  
 values\_to = "Level of Participation")   
  
#create cross table to calculate number of articles for each breadth of involvement broken down by level of participation  
breadthbroadtab <- crosstable(breadthbroadlong, "Breadth of Involvement", by = c("Level of Participation", "yearPub"),  
 percent\_pattern = "{n}")   
breadthbroadtab <- as.data.frame(breadthbroadtab)  
  
breathbroadtablong <- breadthbroadtab %>%  
 pivot\_longer(cols = c("Level of Participation=No involvement & yearPub=2019", "Level of Participation=Informing & yearPub=2019", "Level of Participation=Consulting & yearPub=2019", "Level of Participation=Engaging & yearPub=2019", "Level of Participation=Co-producing & yearPub=2019", "Level of Participation=Community led & yearPub=2019", "Level of Participation=Community controlled & yearPub=2019", "Level of Participation=Insufficient information & yearPub=2019","Level of Participation=No involvement & yearPub=2022", "Level of Participation=Informing & yearPub=2022", "Level of Participation=Consulting & yearPub=2022", "Level of Participation=Engaging & yearPub=2022", "Level of Participation=Co-producing & yearPub=2022", "Level of Participation=Community led & yearPub=2022", "Level of Participation=Community controlled & yearPub=2022", "Level of Participation=Insufficient information & yearPub=2022"),  
 names\_to = "levelOfPart",  
 values\_to = "Count") %>%  
 select(c("variable", "levelOfPart", "Count")) %>%  
 rename("breadthOfPart" = "variable")  
  
breathbroadtablong$Count <- as.numeric(breathbroadtablong$Count)  
  
#delimiting column  
  
breathbroadtablong <- separate\_wider\_delim(breathbroadtablong, cols = levelOfPart, delim = " & ", names = c("Level of Participation", "Year of Publication"))  
  
breathbroadtablong$`Level of Participation` <- gsub("Level of Participation=","",breathbroadtablong$`Level of Participation`)  
breathbroadtablong$`Year of Publication` <- gsub("yearPub=","",breathbroadtablong$`Year of Publication`)  
  
breathbroadtablong <- mutate(breathbroadtablong, `Level of Participation`=factor(`Level of Participation`, levels = c("Community controlled","Community led","Co-producing","Engaging","Consulting","Informing","Insufficient information", "No involvement")))  
  
breadthBroadBarChart <- ggplot(breathbroadtablong, aes(fill = fct\_relevel(`Year of Publication`, c("2022","2019")), y = Count, x = fct\_relevel(breadthOfPart,c("Insufficient information", "Dissemination", "Analysis", "Implementation", "Design", "Conceptualisation")))) +  
 geom\_bar(stat = "identity") +  
 theme(legend.position = "bottom",   
 legend.text = element\_text(size = 7),  
 legend.key.size = unit(.2, "cm"),  
 axis.text.y = element\_text(size = 8),  
 axis.text.x = element\_text(size = 8)) +  
 labs(x = "Breadth of involvement",  
 y = "Number of published studies",  
 fill = "Year of Publication") +  
 scale\_fill\_brewer(palette = "Set2") +  
 coord\_flip() +  
 facet\_wrap(~ `Level of Participation`, ncol = 3)  
  
breadthBroadBarChart



##### ***5) Research disciplines / areas (Overall)***

cbPalette <- c("#999999", "#E69F00", "#56B4E9", "#009E73", "#F0E442", "#0072B2", "#D55E00", "#CC79A7")  
  
#research disciplines  
partDisdata <- fulldata %>%  
 select(c("levelOfPart", "researchArea"))  
  
partDisdata <- as.data.frame(table(partDisdata))  
  
partDisBarChart <- ggplot(partDisdata, aes(x = fct\_relevel(researchArea, c("Diagnosis", "Biology", "Risk factors", "Treatments & Interventions", "Services", "Lifespan issues", "Infrastructure and surveillance")), y = Freq, fill = fct\_relevel(levelOfPart, c("Community controlled", "Community led", "Co-producing", "Engaging", "Consulting", "Informing", "No community involvement", "Insufficient information")))) +  
 geom\_col() +  
 labs(x = "Research Areas",  
 y = "Number of articles",  
 fill = "Level of Participation") +  
# scale\_fill\_manual(values = cbPalette) +  
 scale\_fill\_brewer(palette = "Set3") +  
 coord\_flip()  
  
partDisBarChart

## Warning: 1 unknown level in `f`: Risk factors  
## 1 unknown level in `f`: Risk factors

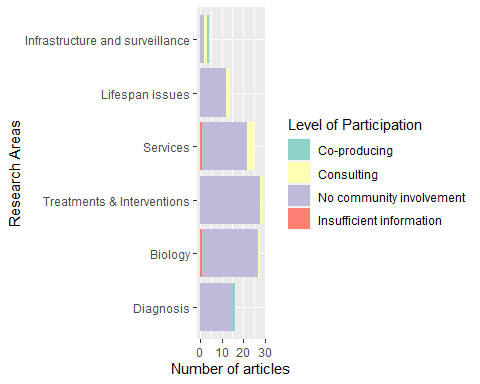


##### ***5a) Research disciplines / areas (2019)***

cbPalette <- c("#999999", "#E69F00", "#56B4E9", "#009E73", "#F0E442", "#0072B2", "#D55E00", "#CC79A7")  
  
#research disciplines  
partDisdata <- fulldata %>%  
 filter(yearPub == 2019) %>%  
 select(c("levelOfPart", "researchArea"))  
  
partDisdata <- as.data.frame(table(partDisdata))  
  
partDisBarChart <- ggplot(partDisdata, aes(x = fct\_relevel(researchArea, c("Diagnosis", "Biology", "Risk factors", "Treatments & Interventions", "Services", "Lifespan issues", "Infrastructure and surveillance")), y = Freq, fill = fct\_relevel(levelOfPart, c("Community controlled", "Community led", "Co-producing", "Engaging", "Consulting", "Informing", "No community involvement", "Insufficient information")))) +  
 geom\_col() +  
 labs(x = "Research Areas",  
 y = "Number of articles",  
 fill = "Level of Participation") +  
# scale\_fill\_manual(values = cbPalette) +  
 scale\_fill\_brewer(palette = "Set3") +  
 coord\_flip()  
  
partDisBarChart

## Warning: 1 unknown level in `f`: Risk factors  
## 1 unknown level in `f`: Risk factors

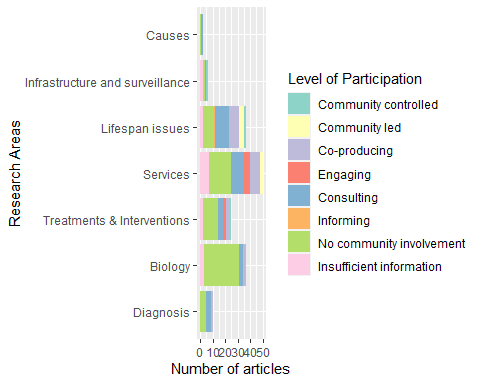
## Warning: 4 unknown levels in `f`: Community controlled, Community led, Engaging, and  
## Informing



##### ***5b) Research disciplines / areas (2022)***

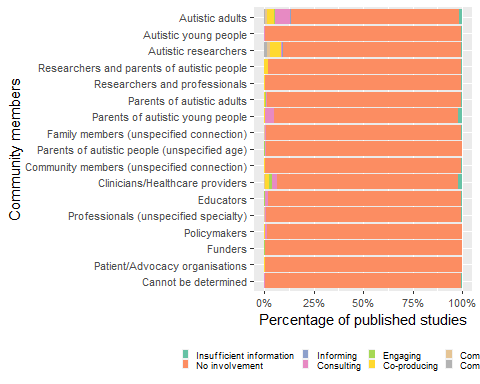
cbPalette <- c("#999999", "#E69F00", "#56B4E9", "#009E73", "#F0E442", "#0072B2", "#D55E00", "#CC79A7")  
  
#research disciplines  
partDisdata <- fulldata %>%  
 filter(yearPub == 2022) %>%  
 select(c("levelOfPart", "researchArea"))  
  
partDisdata <- as.data.frame(table(partDisdata))  
  
partDisBarChart <- ggplot(partDisdata, aes(x = fct\_relevel(researchArea, c("Diagnosis", "Biology", "Risk factors", "Treatments & Interventions", "Services", "Lifespan issues", "Infrastructure and surveillance")), y = Freq, fill = fct\_relevel(levelOfPart, c("Community controlled", "Community led", "Co-producing", "Engaging", "Consulting", "Informing", "No community involvement", "Insufficient information")))) +  
 geom\_col() +  
 labs(x = "Research Areas",  
 y = "Number of articles",  
 fill = "Level of Participation") +  
# scale\_fill\_manual(values = cbPalette) +  
 scale\_fill\_brewer(palette = "Set3") +  
 coord\_flip()  
  
partDisBarChart

## Warning: 1 unknown level in `f`: Risk factors  
## 1 unknown level in `f`: Risk factors



##### ***6) Composition of community members (Overall)***

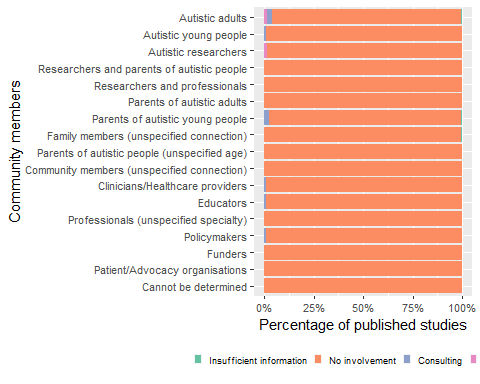
cbPalette <- c("#999999", "#E69F00", "#56B4E9", "#009E73", "#F0E442", "#0072B2", "#D55E00", "#CC79A7")  
  
#community members  
partCommdata <- fulldata %>%  
 select(c("Autistic adults":"Cannot be determined"))  
  
# pivot wide to long  
  
partCommdataLong <- partCommdata %>%  
 pivot\_longer(cols = c("Autistic adults",  
 "Autistic young people",  
 "Autistic researchers",  
 "Researchers and parents of autistic people",  
 "Researchers and professionals",  
 "Parents of autistic adults",  
 "Parents of autistic young people",  
 "Family members (unspecified connection)",  
 "Parents of autistic people (unspecified age)",  
 "Community members (unspecified connection)",  
 "Clinicians/Healthcare providers",  
 "Educators",  
 "Professionals (unspecified specialty)",  
 "Policymakers",  
 "Funders",  
 "Patient/Advocacy organisations",  
 "Cannot be determined"),  
 names\_to = "Community Members",  
 values\_to = "Level of Participation")  
  
#create cross table to calculate number of articles for each group of community member broken down by level of participation  
  
commparttab <- crosstable(partCommdataLong, "Community Members", by = "Level of Participation",  
 percent\_pattern = "{n}")   
commparttab <- as.data.frame(commparttab)  
  
commparttablong <- commparttab %>%  
 pivot\_longer(cols = c("No involvement", "Informing", "Consulting", "Engaging", "Co-producing", "Community led", "Community controlled", "Insufficient information"),  
 names\_to = "levelOfPart",  
 values\_to = "Count") %>%  
 select(c("variable", "levelOfPart", "Count")) %>%  
 rename("commMembers" = "variable")  
  
commparttablong$Count <- as.numeric(commparttablong$Count)  
  
#create stacked percent bar chart  
commPartBarChart <- ggplot(commparttablong, aes(x = fct\_relevel(commMembers, c("Cannot be determined","Patient/Advocacy organisations","Funders","Policymakers","Professionals (unspecified specialty)","Educators","Clinicians/Healthcare providers","Community members (unspecified connection)","Parents of autistic people (unspecified age)","Family members (unspecified connection)","Parents of autistic young people","Parents of autistic adults","Researchers and professionals","Researchers and parents of autistic people","Autistic researchers","Autistic young people","Autistic adults")), y = Count, fill = fct\_relevel(levelOfPart, c("Insufficient information", "No involvement", "Informing", "Consulting", "Engaging", "Co-producing", "Community led", "Community controlled")))) +  
 geom\_bar(position = "fill", stat = "identity") +  
 theme(legend.position = "bottom",   
 legend.text = element\_text(size = 7),  
 legend.key.size = unit(.2, "cm"),  
 axis.text.y = element\_text(size = 8),  
 axis.text.x = element\_text(size = 8)) +  
 labs(x = "Community members",  
 y = "Percentage of published studies",  
 fill = "") +  
 scale\_y\_continuous(labels = scales::percent) +  
 scale\_fill\_brewer(palette = "Set2") +  
 coord\_flip()  
  
commPartBarChart



##### ***6a) Composition of community members (2019)***

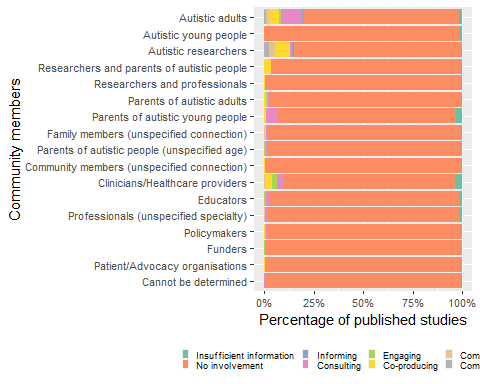
cbPalette <- c("#999999", "#E69F00", "#56B4E9", "#009E73", "#F0E442", "#0072B2", "#D55E00", "#CC79A7")  
  
#community members  
partCommdata <- fulldata %>%  
 filter(yearPub == 2019) %>%  
 select(c("Autistic adults":"Cannot be determined"))  
  
# pivot wide to long  
  
partCommdataLong <- partCommdata %>%  
 pivot\_longer(cols = c("Autistic adults",  
 "Autistic young people",  
 "Autistic researchers",  
 "Researchers and parents of autistic people",  
 "Researchers and professionals",  
 "Parents of autistic adults",  
 "Parents of autistic young people",  
 "Family members (unspecified connection)",  
 "Parents of autistic people (unspecified age)",  
 "Community members (unspecified connection)",  
 "Clinicians/Healthcare providers",  
 "Educators",  
 "Professionals (unspecified specialty)",  
 "Policymakers",  
 "Funders",  
 "Patient/Advocacy organisations",  
 "Cannot be determined"),  
 names\_to = "Community Members",  
 values\_to = "Level of Participation")  
  
#create cross table to calculate number of articles for each group of community member broken down by level of participation  
  
commparttab <- crosstable(partCommdataLong, "Community Members", by = "Level of Participation",  
 percent\_pattern = "{n}")   
commparttab <- as.data.frame(commparttab)  
  
commparttablong <- commparttab %>%  
 pivot\_longer(cols = c("No involvement", "Consulting", "Co-producing", "Insufficient information"),  
 names\_to = "levelOfPart",  
 values\_to = "Count") %>%  
 select(c("variable", "levelOfPart", "Count")) %>%  
 rename("commMembers" = "variable")  
  
commparttablong$Count <- as.numeric(commparttablong$Count)  
  
#create stacked percent bar chart  
commPartBarChart <- ggplot(commparttablong, aes(x = fct\_relevel(commMembers, c("Cannot be determined","Patient/Advocacy organisations","Funders","Policymakers","Professionals (unspecified specialty)","Educators","Clinicians/Healthcare providers","Community members (unspecified connection)","Parents of autistic people (unspecified age)","Family members (unspecified connection)","Parents of autistic young people","Parents of autistic adults","Researchers and professionals","Researchers and parents of autistic people","Autistic researchers","Autistic young people","Autistic adults")), y = Count, fill = fct\_relevel(levelOfPart, c("Insufficient information", "No involvement", "Informing", "Consulting", "Engaging", "Co-producing", "Community led", "Community controlled")))) +  
 geom\_bar(position = "fill", stat = "identity") +  
 theme(legend.position = "bottom",   
 legend.text = element\_text(size = 7),  
 legend.key.size = unit(.2, "cm"),  
 axis.text.y = element\_text(size = 8),  
 axis.text.x = element\_text(size = 8)) +  
 labs(x = "Community members",  
 y = "Percentage of published studies",  
 fill = "") +  
 scale\_y\_continuous(labels = scales::percent) +  
 scale\_fill\_brewer(palette = "Set2") +  
 coord\_flip()  
  
commPartBarChart

## Warning: 4 unknown levels in `f`: Informing, Engaging, Community led, and Community  
## controlled



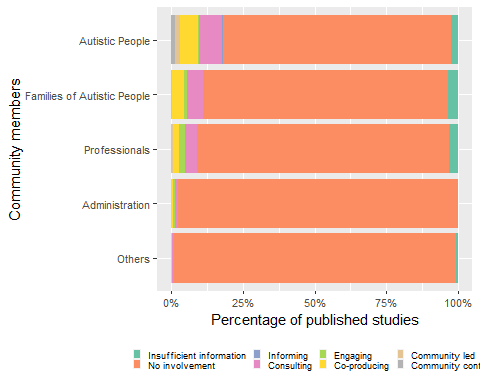
##### ***6b) Composition of community members (2022)***

cbPalette <- c("#999999", "#E69F00", "#56B4E9", "#009E73", "#F0E442", "#0072B2", "#D55E00", "#CC79A7")  
  
#community members  
partCommdata <- fulldata %>%  
 filter(yearPub == 2022) %>%  
 select(c("Autistic adults":"Cannot be determined"))  
  
# pivot wide to long  
  
partCommdataLong <- partCommdata %>%  
 pivot\_longer(cols = c("Autistic adults",  
 "Autistic young people",  
 "Autistic researchers",  
 "Researchers and parents of autistic people",  
 "Researchers and professionals",  
 "Parents of autistic adults",  
 "Parents of autistic young people",  
 "Family members (unspecified connection)",  
 "Parents of autistic people (unspecified age)",  
 "Community members (unspecified connection)",  
 "Clinicians/Healthcare providers",  
 "Educators",  
 "Professionals (unspecified specialty)",  
 "Policymakers",  
 "Funders",  
 "Patient/Advocacy organisations",  
 "Cannot be determined"),  
 names\_to = "Community Members",  
 values\_to = "Level of Participation")  
  
#create cross table to calculate number of articles for each group of community member broken down by level of participation  
  
commparttab <- crosstable(partCommdataLong, "Community Members", by = "Level of Participation",  
 percent\_pattern = "{n}")   
commparttab <- as.data.frame(commparttab)  
  
commparttablong <- commparttab %>%  
 pivot\_longer(cols = c("No involvement", "Informing", "Consulting", "Engaging", "Co-producing", "Community led", "Community controlled", "Insufficient information"),  
 names\_to = "levelOfPart",  
 values\_to = "Count") %>%  
 select(c("variable", "levelOfPart", "Count")) %>%  
 rename("commMembers" = "variable")  
  
commparttablong$Count <- as.numeric(commparttablong$Count)  
  
#create stacked percent bar chart  
commPartBarChart <- ggplot(commparttablong, aes(x = fct\_relevel(commMembers, c("Cannot be determined","Patient/Advocacy organisations","Funders","Policymakers","Professionals (unspecified specialty)","Educators","Clinicians/Healthcare providers","Community members (unspecified connection)","Parents of autistic people (unspecified age)","Family members (unspecified connection)","Parents of autistic young people","Parents of autistic adults","Researchers and professionals","Researchers and parents of autistic people","Autistic researchers","Autistic young people","Autistic adults")), y = Count, fill = fct\_relevel(levelOfPart, c("Insufficient information", "No involvement", "Informing", "Consulting", "Engaging", "Co-producing", "Community led", "Community controlled")))) +  
 geom\_bar(position = "fill", stat = "identity") +  
 theme(legend.position = "bottom",   
 legend.text = element\_text(size = 7),  
 legend.key.size = unit(.2, "cm"),  
 axis.text.y = element\_text(size = 8),  
 axis.text.x = element\_text(size = 8)) +  
 labs(x = "Community members",  
 y = "Percentage of published studies",  
 fill = "") +  
 scale\_y\_continuous(labels = scales::percent) +  
 scale\_fill\_brewer(palette = "Set2") +  
 coord\_flip()  
  
commPartBarChart



##### ***7) Composition of community members - Broad (Overall)***

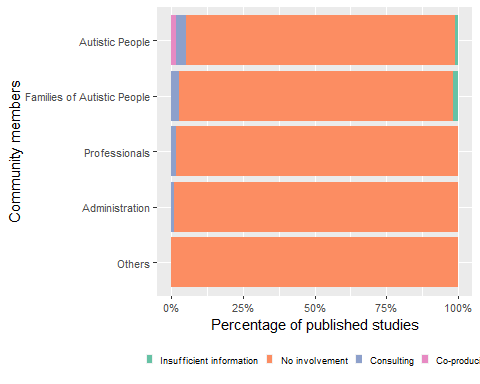
cbPalette <- c("#999999", "#E69F00", "#56B4E9", "#009E73", "#F0E442", "#0072B2", "#D55E00", "#CC79A7")  
  
#community members  
partCommdata <- fulldata %>%  
 select(c("Autistic People":"Others"))  
  
# pivot wide to long  
  
partCommdataLong <- partCommdata %>%  
 pivot\_longer(cols = c("Autistic People",  
 "Families of Autistic People",  
 "Professionals",  
 "Administration",  
 "Others"),  
 names\_to = "Community Members",  
 values\_to = "Level of Participation")  
  
#create cross table to calculate number of articles for each group of community member broken down by level of participation  
  
commparttab <- crosstable(partCommdataLong, "Community Members", by = "Level of Participation",  
 percent\_pattern = "{n}")   
commparttab <- as.data.frame(commparttab)  
  
commparttablong <- commparttab %>%  
 pivot\_longer(cols = c("No involvement", "Informing", "Consulting", "Engaging", "Co-producing", "Community led", "Community controlled", "Insufficient information"),  
 names\_to = "levelOfPart",  
 values\_to = "Count") %>%  
 select(c("variable", "levelOfPart", "Count")) %>%  
 rename("commMembers" = "variable")  
  
commparttablong$Count <- as.numeric(commparttablong$Count)  
  
#create stacked percent bar chart  
commPartBarChart <- ggplot(commparttablong, aes(x = fct\_relevel(commMembers,c("Others","Administration","Professionals","Families of Autistic People","Autistic People")), y = Count, fill = fct\_relevel(levelOfPart, c("Insufficient information", "No involvement", "Informing", "Consulting", "Engaging", "Co-producing", "Community led", "Community controlled")))) +  
 geom\_bar(position = "fill", stat = "identity") +  
 theme(legend.position = "bottom",   
 legend.text = element\_text(size = 7),  
 legend.key.size = unit(.2, "cm"),  
 axis.text.y = element\_text(size = 8),  
 axis.text.x = element\_text(size = 8)) +  
 labs(x = "Community members",  
 y = "Percentage of published studies",  
 fill = "") +  
 scale\_y\_continuous(labels = scales::percent) +  
 scale\_fill\_brewer(palette = "Set2") +  
 coord\_flip()  
  
commPartBarChart



##### ***7a) Composition of community members - Broad (2019)***

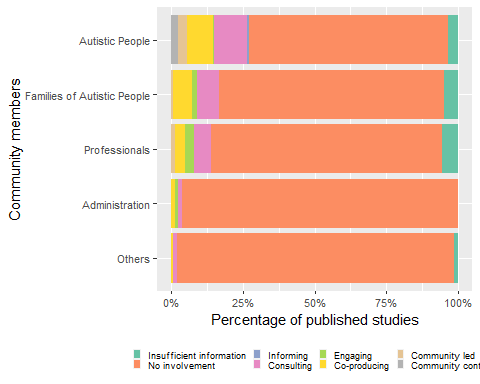
cbPalette <- c("#999999", "#E69F00", "#56B4E9", "#009E73", "#F0E442", "#0072B2", "#D55E00", "#CC79A7")  
  
#community members  
partCommdata <- fulldata %>%  
 filter(yearPub == 2019) %>%  
 select(c("Autistic People":"Others"))  
  
# pivot wide to long  
  
partCommdataLong <- partCommdata %>%  
 pivot\_longer(cols = c("Autistic People",  
 "Families of Autistic People",  
 "Professionals",  
 "Administration",  
 "Others"),  
 names\_to = "Community Members",  
 values\_to = "Level of Participation")  
  
#create cross table to calculate number of articles for each group of community member broken down by level of participation  
  
commparttab <- crosstable(partCommdataLong, "Community Members", by = "Level of Participation",  
 percent\_pattern = "{n}")   
commparttab <- as.data.frame(commparttab)  
  
commparttablong <- commparttab %>%  
 pivot\_longer(cols = c("No involvement", "Consulting", "Co-producing", "Insufficient information"),  
 names\_to = "levelOfPart",  
 values\_to = "Count") %>%  
 select(c("variable", "levelOfPart", "Count")) %>%  
 rename("commMembers" = "variable")  
  
commparttablong$Count <- as.numeric(commparttablong$Count)  
  
#create stacked percent bar chart  
commPartBarChart <- ggplot(commparttablong, aes(x = fct\_relevel(commMembers,c("Others","Administration","Professionals","Families of Autistic People","Autistic People")), y = Count, fill = fct\_relevel(levelOfPart, c("Insufficient information", "No involvement", "Informing", "Consulting", "Engaging", "Co-producing", "Community led", "Community controlled")))) +  
 geom\_bar(position = "fill", stat = "identity") +  
 theme(legend.position = "bottom",   
 legend.text = element\_text(size = 7),  
 legend.key.size = unit(.2, "cm"),  
 axis.text.y = element\_text(size = 8),  
 axis.text.x = element\_text(size = 8)) +  
 labs(x = "Community members",  
 y = "Percentage of published studies",  
 fill = "") +  
 scale\_y\_continuous(labels = scales::percent) +  
 scale\_fill\_brewer(palette = "Set2") +  
 coord\_flip()  
  
commPartBarChart

## Warning: 4 unknown levels in `f`: Informing, Engaging, Community led, and Community  
## controlled



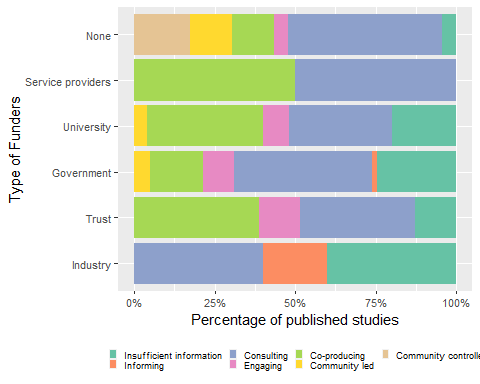
##### ***7b) Composition of community members - Broad (2022)***

cbPalette <- c("#999999", "#E69F00", "#56B4E9", "#009E73", "#F0E442", "#0072B2", "#D55E00", "#CC79A7")  
  
#community members  
partCommdata <- fulldata %>%  
 filter(yearPub == 2022) %>%  
 select(c("Autistic People":"Others"))  
  
# pivot wide to long  
  
partCommdataLong <- partCommdata %>%  
 pivot\_longer(cols = c("Autistic People",  
 "Families of Autistic People",  
 "Professionals",  
 "Administration",  
 "Others"),  
 names\_to = "Community Members",  
 values\_to = "Level of Participation")  
  
#create cross table to calculate number of articles for each group of community member broken down by level of participation  
  
commparttab <- crosstable(partCommdataLong, "Community Members", by = "Level of Participation",  
 percent\_pattern = "{n}")   
commparttab <- as.data.frame(commparttab)  
  
commparttablong <- commparttab %>%  
 pivot\_longer(cols = c("No involvement", "Informing", "Consulting", "Engaging", "Co-producing", "Community led", "Community controlled", "Insufficient information"),  
 names\_to = "levelOfPart",  
 values\_to = "Count") %>%  
 select(c("variable", "levelOfPart", "Count")) %>%  
 rename("commMembers" = "variable")  
  
commparttablong$Count <- as.numeric(commparttablong$Count)  
  
#create stacked percent bar chart  
commPartBarChart <- ggplot(commparttablong, aes(x = fct\_relevel(commMembers,c("Others","Administration","Professionals","Families of Autistic People","Autistic People")), y = Count, fill = fct\_relevel(levelOfPart, c("Insufficient information", "No involvement", "Informing", "Consulting", "Engaging", "Co-producing", "Community led", "Community controlled")))) +  
 geom\_bar(position = "fill", stat = "identity") +  
 theme(legend.position = "bottom",   
 legend.text = element\_text(size = 7),  
 legend.key.size = unit(.2, "cm"),  
 axis.text.y = element\_text(size = 8),  
 axis.text.x = element\_text(size = 8)) +  
 labs(x = "Community members",  
 y = "Percentage of published studies",  
 fill = "") +  
 scale\_y\_continuous(labels = scales::percent) +  
 scale\_fill\_brewer(palette = "Set2") +  
 coord\_flip()  
  
commPartBarChart



##### ***8) Funders (OVERALL)***

funderdata <- fulldata %>%  
 select(c("Industry":"None"))  
  
#pivot wide to long  
  
funderdatalong <- funderdata %>%  
 pivot\_longer(cols = c("Industry", "Trust", "Government", "University", "Service providers", "None"),  
 names\_to = "Funder",  
 values\_to = "Level of Participation")   
  
#create cross table to calculate number of articles for each funder broken down by level of participation  
fundparttab <- crosstable(funderdatalong, "Funder", by = "Level of Participation",  
 percent\_pattern = "{n}")   
fundparttab <- as.data.frame(fundparttab)  
  
fundpartlong <- fundparttab %>%  
 pivot\_longer(cols = c("Informing", "Consulting", "Engaging", "Co-producing", "Community led", "Community controlled", "Insufficient information"),  
 names\_to = "levelOfPart",  
 values\_to = "Count") %>%  
 select(c("variable", "levelOfPart", "Count")) %>%  
 rename("funder" = "variable")  
  
fundpartlong$Count <- as.numeric(fundpartlong$Count)  
  
#create stacked percent bar chart  
fundBarChart <- ggplot(fundpartlong, aes(x = fct\_relevel(funder, c("Industry", "Trust", "Government", "University", "Service providers", "None")), y = Count, fill = fct\_relevel(levelOfPart, c("Insufficient information", "Informing", "Consulting", "Engaging", "Co-producing", "Community led", "Community controlled")))) +  
 geom\_bar(position = "fill", stat = "identity") +  
 theme(legend.position = "bottom",   
 legend.text = element\_text(size = 7),  
 legend.key.size = unit(.2, "cm"),  
 axis.text.y = element\_text(size = 8),  
 axis.text.x = element\_text(size = 8)) +  
 labs(x = "Type of Funders",  
 y = "Percentage of published studies",  
 fill = "") +  
 scale\_y\_continuous(labels = scales::percent) +  
 scale\_fill\_brewer(palette = "Set2") +  
 coord\_flip()  
  
fundBarChart

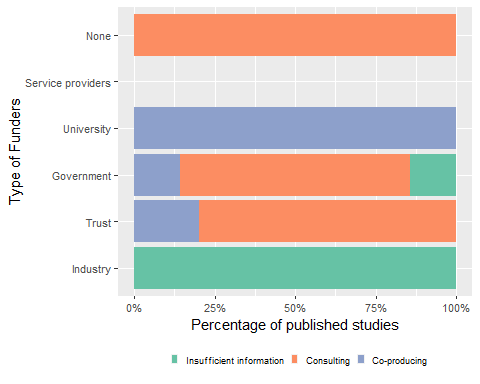


##### ***8a) Funders (2019)***

funderdata <- fulldata %>%  
 filter(yearPub == 2019) %>%  
 select(c("Industry":"None"))  
  
#pivot wide to long  
  
funderdatalong <- funderdata %>%  
 pivot\_longer(cols = c("Industry", "Trust", "Government", "University", "Service providers", "None"),  
 names\_to = "Funder",  
 values\_to = "Level of Participation")   
  
#create cross table to calculate number of articles for each funder broken down by level of participation  
fundparttab <- crosstable(funderdatalong, "Funder", by = "Level of Participation",  
 percent\_pattern = "{n}")   
fundparttab <- as.data.frame(fundparttab)  
  
fundpartlong <- fundparttab %>%  
 pivot\_longer(cols = c("Consulting","Co-producing", "Insufficient information"),  
 names\_to = "levelOfPart",  
 values\_to = "Count") %>%  
 select(c("variable", "levelOfPart", "Count")) %>%  
 rename("funder" = "variable")  
  
fundpartlong$Count <- as.numeric(fundpartlong$Count)  
  
#create stacked percent bar chart  
fundBarChart <- ggplot(fundpartlong, aes(x = fct\_relevel(funder, c("Industry", "Trust", "Government", "University", "Service providers", "None")), y = Count, fill = fct\_relevel(levelOfPart, c("Insufficient information", "Informing", "Consulting", "Engaging", "Co-producing", "Community led", "Community controlled")))) +  
 geom\_bar(position = "fill", stat = "identity") +  
 theme(legend.position = "bottom",   
 legend.text = element\_text(size = 7),  
 legend.key.size = unit(.2, "cm"),  
 axis.text.y = element\_text(size = 8),  
 axis.text.x = element\_text(size = 8)) +  
 labs(x = "Type of Funders",  
 y = "Percentage of published studies",  
 fill = "") +  
 scale\_y\_continuous(labels = scales::percent) +  
 scale\_fill\_brewer(palette = "Set2") +  
 coord\_flip()  
  
fundBarChart

## Warning: 4 unknown levels in `f`: Informing, Engaging, Community led, and Community  
## controlled

## Warning: Removed 3 rows containing missing values (`geom\_bar()`).



##### ***8a) Funders (2022)***

funderdata <- fulldata %>%  
 filter(yearPub == 2022) %>%  
 select(c("Industry":"None"))  
  
#pivot wide to long  
  
funderdatalong <- funderdata %>%  
 pivot\_longer(cols = c("Industry", "Trust", "Government", "University", "Service providers", "None"),  
 names\_to = "Funder",  
 values\_to = "Level of Participation")   
  
#create cross table to calculate number of articles for each funder broken down by level of participation  
fundparttab <- crosstable(funderdatalong, "Funder", by = "Level of Participation",  
 percent\_pattern = "{n}")   
fundparttab <- as.data.frame(fundparttab)  
  
fundpartlong <- fundparttab %>%  
 pivot\_longer(cols = c("Informing", "Consulting", "Engaging", "Co-producing", "Community led", "Community controlled", "Insufficient information"),  
 names\_to = "levelOfPart",  
 values\_to = "Count") %>%  
 select(c("variable", "levelOfPart", "Count")) %>%  
 rename("funder" = "variable")  
  
fundpartlong$Count <- as.numeric(fundpartlong$Count)  
  
#create stacked percent bar chart  
fundBarChart <- ggplot(fundpartlong, aes(x = fct\_relevel(funder, c("Industry", "Trust", "Government", "University", "Service providers", "None")), y = Count, fill = fct\_relevel(levelOfPart, c("Insufficient information", "Informing", "Consulting", "Engaging", "Co-producing", "Community led", "Community controlled")))) +  
 geom\_bar(position = "fill", stat = "identity") +  
 theme(legend.position = "bottom",   
 legend.text = element\_text(size = 7),  
 legend.key.size = unit(.2, "cm"),  
 axis.text.y = element\_text(size = 8),  
 axis.text.x = element\_text(size = 8)) +  
 labs(x = "Type of Funders",  
 y = "Percentage of published studies",  
 fill = "") +  
 scale\_y\_continuous(labels = scales::percent) +  
 scale\_fill\_brewer(palette = "Set2") +  
 coord\_flip()  
  
fundBarChart

