

# DAaV-A1DMG012522

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# Data Analysis & Visualization

## ASSIGNMENT 1

GRI19845230 (DEWI GRIFFITHS)

**PHYSICAL ACTIVITY INFOGRAPHIC**

**1**

**IMPROVEMENTS REQUIRED  
RESULTS FROM IMPROVEMENTS  
DESCRIPTION OF IMPROVEMENTS**

**2**

**3**

**4**

**COVID CASES IN WALES – OCTOBER 2021 INFOGRAPHIC**

**5**

**REFERENCES**

**6**

**APPENDIX**

**7**

# Physical Activity Infographic

The presented infographic [Figure 1] will be examined based on the design choices and provided content to support its message. [1] The intention of this poster is to inform and motivate readers to exercise,

The infographic is a visualisation of large sums of data, information which has been studied and produced by the [Department of Health and Social Care](#). [2], [3]



Figure 1

“Make a start today: it’s never too late”. These statements are not informative and are opinionated, thus causing the space to dissipate and could alter how readers perceive the shown data. [7] There is another comment reading, “Some is good, more is better” which is acceptable as it is based on the research done by the [Department of Health and Social Care](#). [1], [3]

The iconography drawn in the poster [Figure 1] features androgynous, featureless and white stick people performing activities with small white text beside them. The space that the stick people take up has forced the activity names to be much smaller and harder to read than it has to be. It is discriminatory to those with bad eyesight. Images are not enough to explain what is being shown, look at the blue background with the two stick figures pushing an invisible wall, or could they be participating in

The grey background will be referred to as the introduction to this poster. The introduction features minimalist statements such as, “Improves sleep” and, “Manages stress” without context of detailed information. This is an effective way to entice the reader to want to absorb more information because it is personal, could be relatable and is factual. [4]

The infographic [Figure 1] incorporates colour effectively. The poster uses light pastel-like colours as a design choice. Dark colours tend to be intimidating, this is probably why light colours were chosen – to motivate readers to listen, learn and achieve. Red, green, blue and purple are pleasant to look at with yellow being the least tolerable to be glanced at. Yellow is disliked and darker, it is used to antagonize the idea of being inactive and in return to motivate the reader to become active. [5] Although these decisions were made to motivate the reader, the information provided does not provide any data or reasonable evidence for why their readers should “Minimise sedentary time”. [1]

The poster [Figure 1] does not discriminate against colour blind individuals as the chosen contrast and brightness are similar – not exact. Information is presented clearly without colour too. [“Appendix: 1” for image] Photopea was used to edit the poster. [6]

Within the introduction section of the poster before the data is seen there are comments, “Every minute counts” and

a conga line? The activity names need to be seen because nobody will guess they are doing “Tai Chi”, or that the stick figure in front of them kicking backwards are doing “Bowls”. [1], [7]

The yellow section of this poster [Figure 1] featuring the word, “Sedentary” does not provide any valid information as stated, nor do the cartoons used have any explanation or activity names unlike other sections of the poster. This is not an effective method to use whitespace when there is no more information for visualizing. [1], [7] The yellow section leaves the reader to come up with information which is subjective based on how they interpret the cartoons and shown statement, this is indirectly spreading false information. [8]

## Improvements Required

The poster’s [Figure 1] introduction’s motivational statements feature irrelevant statements that manipulate how the information is perceived. This issue can be fixed with text replacement featuring relevant information gathered from their research. [3] An alternative solution to text replacement is covering them entirely with the statement “Some is good, more is better”, or these statements could be replaced with more health-based information. [1]

The poster’s [Figure 1] iconography is large enough to where the activity name is hard to read for their target audience who may suffer from bad eyesight. There are three solutions:

- Reduce the size of the stick figures and increase the font’s size to a middle ground.
- Alter the space other information consumes to increase the size of activity names along with keeping the iconography at their current size.
- Change the colour of the activity names to be easily seen, the text blends into the background next to the brighter and whiter stick figures. [7]

The final required improvements to amend this infographic [Figure 1] for effective, concise and factual information would be to provide a reason for why readers should reduce their time spent on sedentary activities, and activity names for the graphics shown. [1] Another solution would be to replace the yellow section with a friendlier colour [5] and provide graphs to visualise the information that is consumed by readers, for example a graph could provide information comparing the health of people that workout to those who do not. [1], [8]

## Results from Improvements

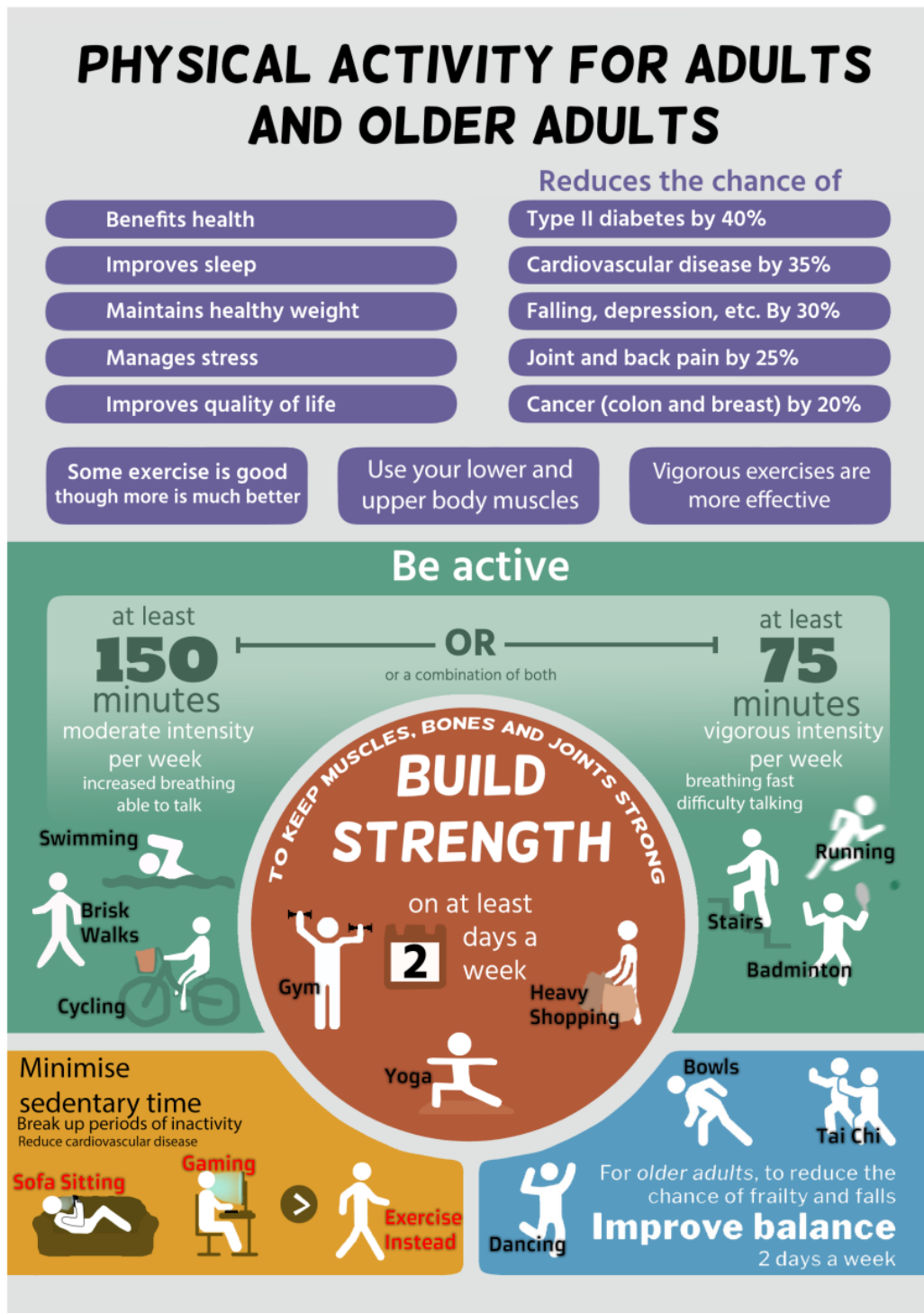


Figure 2

## Description of Improvements

The following improvements were made:

- The motivational statements were replaced with motivating statements which are factual using the information provided by the *UK Chief Medical Officers' Guidelines 2019*. [3]
- The text has been given outer emboss styling effects to make the text easy to read, even with an interesting object behind them.
- The text has been moved in front of the stick figures as it will be easily seen and even harder to miss.
- The activity names have been made a different colour within the sedentary section of the poster.
- The stick figures have been spaced out for decreasing whitespace and potential slots for activity text.
- The yellow section has been given a different activity names and information related to downtime which has been provided by the *UK Chief Medical Officers' Guidelines 2019*. [3]
- The "Reduces the chance of" statement has been moved above the information that follows for it to be easier to read without the need to tilt the page or the head.

These changes were made [Figure 2] for increasing accuracy and availability of information as well as eliminating bias from the infographic. [Figure 1]

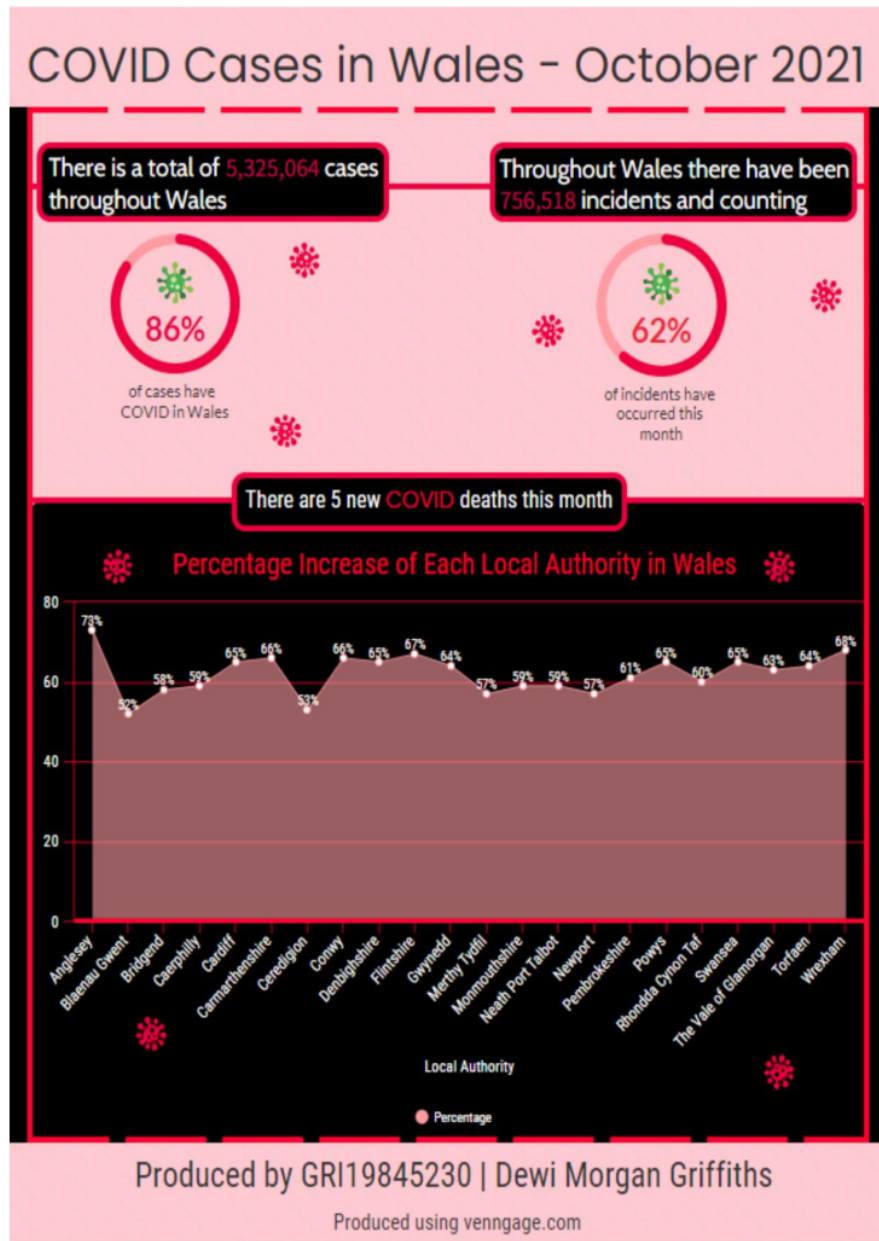
The changes that were made increase the accessibility of the poster and remains colour-blind friendly. ["Appendix: 2" for image]

## COVID Cases in Wales – October 2021 Infographic

This infographic was produced using Vengage, a web-based application. [9] The statistics used here are based on the October 2021 cases generated by MSOA. [10] All of the icons uses are by Vengage which allowed vast amounts of customisation including colour changes, size, and icons within statistic-based visuals. This allowed our data to be seen by those who may suffer from colour blindness. [“Appendix: 3” for image]

Red and black are the infographic’s theme colours as they are eye-catching and on topic for the subject matter. [5]

The font for text remained alike to one another as opposed to the numbers in red, the font changes to provide a sharper look for the statistic to hit harder for the audience.



The featured icons represent germs and bacteria which COVID is transmitted from.

A line graph was chosen to represent the percentages across each local authority because it is user-friendly to read and look at.

Figure 3

## References

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## Appendix

| Appendix Number | Referred Item                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Item Description                                                                                                |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| 1               |  <p>The poster is titled "Physical activity for adults and older adults". It lists benefits of physical activity: Benefits health, Improves sleep, Maintains healthy weight, Manages stress, and Improves quality of life. It also lists conditions that can be reduced by physical activity: Type II Diabetes (-40%), Cardiovascular disease (-35%), Falls, depression etc. (-30%), Joint and back pain (-25%), and Cancers (colon and breast) (-20%). It encourages activity with the message "Some is good, more is better" and "Make a start today: it's never too late". It states "Every minute counts".</p> <p><b>Be active</b></p> <p>at least <b>150</b> minutes moderate intensity per week (increased breathing able to talk) OR at least <b>75</b> minutes vigorous intensity per week (breathing fast difficulty talking).</p> <p><b>Build strength</b> to keep muscles, bones and joints strong on at least <b>2</b> days a week.</p> <p><b>Minimise sedentary time</b> Break up periods of inactivity.</p> <p><b>Improve balance</b> For older adults, to reduce the chance of frailty and falls 2 days a week.</p> <p>UK Chief Medical Officers' Physical Activity Guidelines 2019</p> | A black and white physical activity poster. This is to test whether the poster itself is colour-blind friendly. |

# PHYSICAL ACTIVITY FOR ADULTS AND OLDER ADULTS

Benefits health

Improves sleep

Maintains healthy weight

Manages stress

Improves quality of life

Reduces the chance of

Type II diabetes by 40%

Cardiovascular disease by 35%

Falling, depression, etc. By 30%

Joint and back pain by 25%

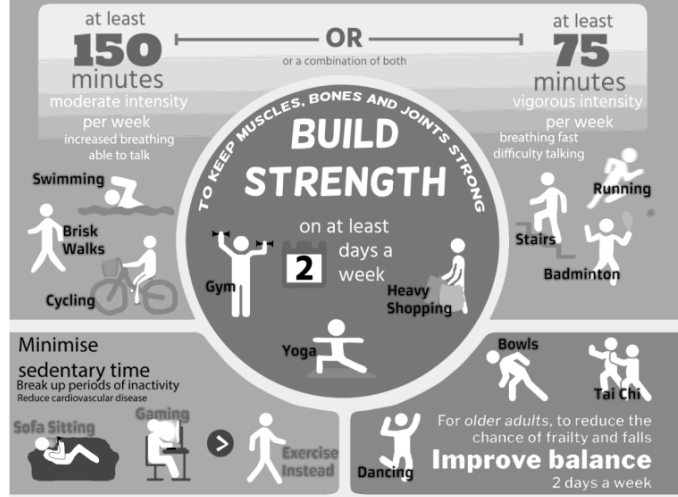
Cancer (colon and breast) by 20%

Some exercise is good though more is much better

Use your lower and upper body muscles

Vigorous exercises are more effective

## Be active



A black and white remastered physical activity poster. This is to test whether the poster itself is colour-blind friendly.

# COVID Cases in Wales - October 2021

There is a total of 5,325,064 cases throughout Wales



of cases have COVID in Wales

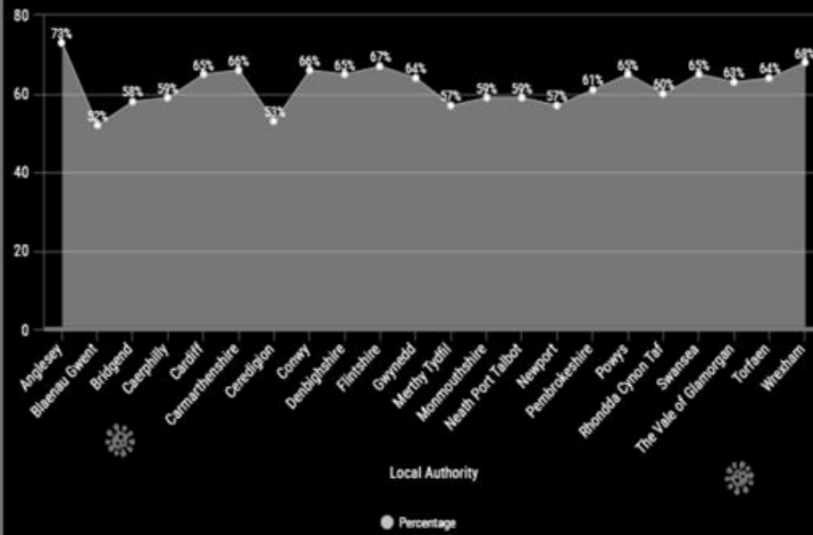
Throughout Wales there have been 756,518 incidents and counting



of incidents have occurred this month

There are 5 new COVID deaths this month

## Percentage Increase of Each Local Authority in Wales



Produced by GRI19845230 | Dewi Morgan Griffiths

Produced using venngage.com

A black and white original infographic poster based on October 2021 by MSA COVID-19 statistics.

This poster is black and white to test and demonstrate whether this poster is colour-blind friendly or not.

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