

Best Practices for Posters

2024

Top 3 Ideas to Keep in Mind

- An effective poster is:
 1. Focused on a single message
 2. Use of easy to interpret visual graphics will help tell the story and uses less text
 3. Keep the sequence well-ordered and obvious

WHAT IS MY MESSAGE?

- You must be able to state your main point(s) succinctly
- All visuals and text should relate to those points
- Think of your poster, i.e., an illustrated abstract

CREATING YOUR POSTER

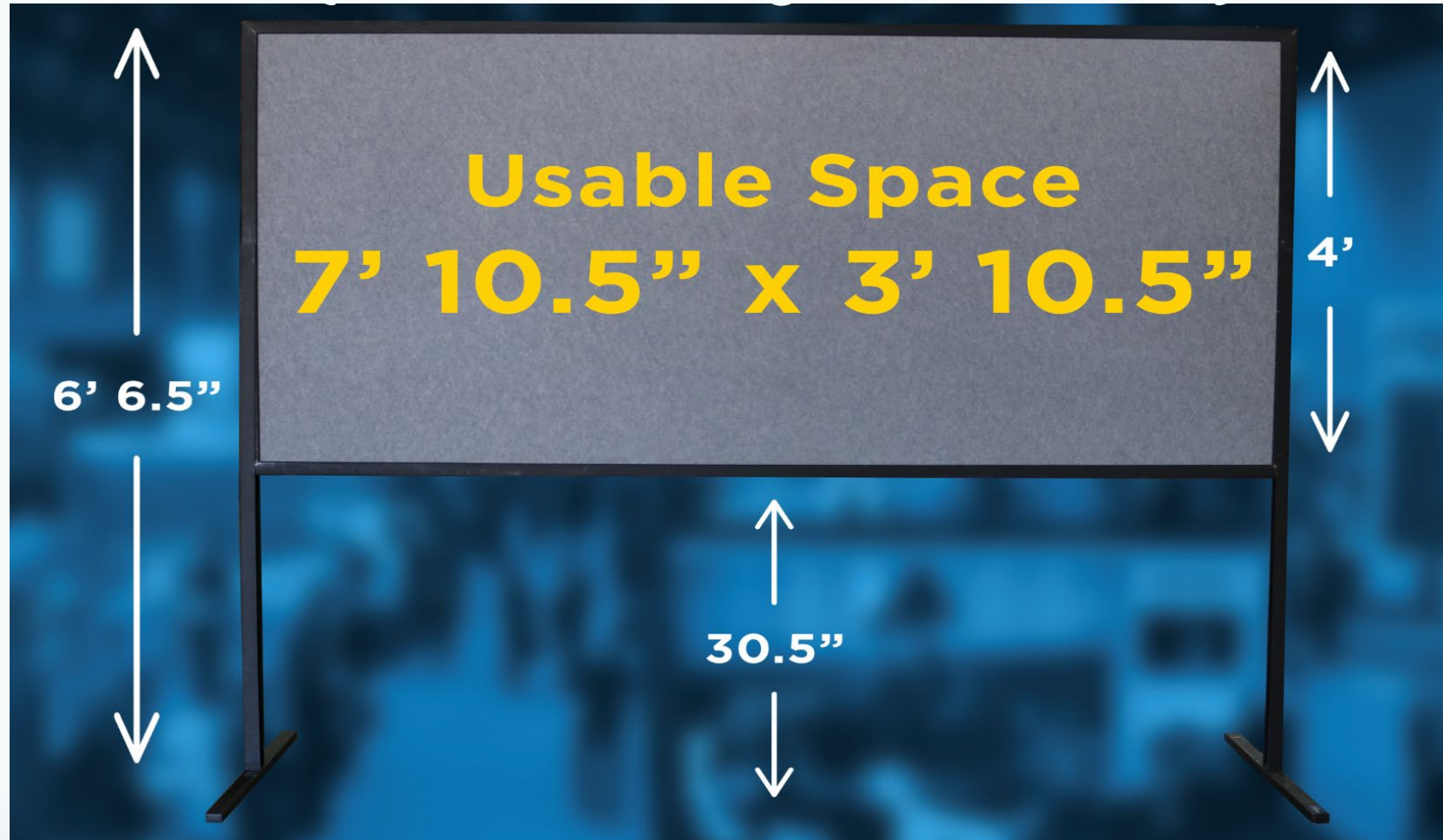
- Place key sections – Title, Authors, Introduction, Objectives, Materials and methods, Results, Conclusions, Literature cited, Acknowledgments, Further information
 - Most posters will include these sections, but your poster may include others depending on the nature of your topic and poster structure (research or intervention-based; quantitative or qualitative research)
- Balance the placement of text and graphics
- Use white space creatively to define flow of information
- Don't fight "reader gravity" that pulls eye from top to bottom, left to right – Readers naturally want to flow from left to right and top to bottom

GRAPHICS

- Graphs communicate relationships quickly
- Graphs should be simple and clean
- Stick to simple 2-D line graphs, bar charts, and pie charts
- Use photos that help deliver your message. If a photo doesn't deliver a message don't use it
- Use graphics minimally to attract attention

TEXT

- Minimize text - use easy to interpret visual graphics instead
- Use phrases (rather than full sentences)
- Use advanced organization
- Don't make fonts too large or too small. A general guideline for large research posters (4' x 8'):
 - — Headline font size: 80-150 pts
 - — Sub-Headline font size: 56-72 pts
 - — Body font size: 32-36 pts



COLORS

- Use a light color background - dark letters for contrast
- Avoid dark backgrounds with light letters in a large area
- Stick to a theme of 2-3 colors
- See samples of “bad” poster (slide 10), “good” poster (slide 11) and poster layout information (slide 12)

EDIT & EVALUATE

- Edit to reduce text
- If it is not relevant to your message, remove it. Remember: If in doubt, leave it out
- Ask colleagues for comment on drafts — invite them to critique
- Evaluate your work: Are your objective and main message obvious?
- Leave time for friendly review and editing



PIGS IN SPACE: EFFECT OF ZERO GRAVITY AND AD LIBITUM FEEDING ON WEIGHT GAIN IN CAVIA PORCELLUS



SPACE-EXES

Colin B. Purrington

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ABSTRACT:

One ignored benefit of space travel is a potential elimination of obesity, a chronic problem for a growing majority in many parts of the world. In theory, when an individual is in a condition of zero gravity, weight is eliminated. Indeed, in space one could conceivably follow ad libitum feeding and never even gain an gram, and the only side effect would be the need to upgrade one's stretchy pants("exercise pants"). But because many diet schemes start as very good theories only to be found to be rather harmful, we tested our predictions with a long-term experiment in a colony of Guinea pigs (*Cavia porcellus*) maintained on the International Space Station. Individuals were housed separately and given unlimited amounts of high-calorie food pellets. Fresh fruits and vegetables were not available in space so were not offered. Every 30 days, each Guinea pig was weighed. After 5 years, we found that individuals, on average, weighed nothing. In addition to weighing nothing, no weight appeared to be gained over the duration of the protocol. If space continues to be gravity-free, and we believe that assumption is sound, we believe that sending the overweight — and those at risk for overweight — to space would be a lasting cure.

INTRODUCTION:

The current obesity epidemic started in the early 1960s with the invention and proliferation of elastane and related stretchy fibers, which released wearers from the rigid constraints of clothes and permitted monthly weight gain without the need to buy new outfits. Indeed, exercise today for hundreds of million people involve only the act of wearing stretchy pants in public, presumably because the constrictive pressure forces fat molecules to adopt a more compact tertiary structure (Xavier 1965).

Luckily, at the same time that fabrics became stretchy, the race to the moon between the United States and Russia yielded a useful fact: gravity in outer space is minimal to nonexistent. When gravity is zero, objects cease to have weight. Indeed, early astronauts and cosmonauts had to secure themselves to their ships with seat belts and sticky boots. The potential application to weight loss was noted immediately, but at the time travel to space was prohibitively expensive and thus the issue was not seriously pursued. Now, however, multiple companies are developing cheap extra-orbital travel options for normal consumers, and potential travelers are also creating news ways to pay for products and services that they cannot actually afford. Together, these factors open the possibility that moving to space could cure overweight syndrome quickly and permanently for a large number of humans.

We studied this potential by following weight gain in Guinea pigs, known on Earth as fond of ad libitum feeding. Guinea pigs were long envisioned to be the "Guinea pigs" of space research, too, so they seemed like the obvious choice. Studies on humans are of course desirable, but we feel this current study will be critical in acquiring the attention of granting agencies.

MATERIALS AND METHODS:

One hundred male and one hundred female Guinea pigs (*Cavia porcellus*) were transported to the International Space Laboratory in 2010. Each pig was housed separately and deprived of exercise wheels and fresh fruits and vegetables for 48 months. Each month, pigs were individually weighed by duct-taping them to an electronic balance sensitive to 0.0001 grams. Back on Earth, an identical cohort was similarly maintained and weighed. Data was analyzed by statistics.

RESULTS:

Mean weight of pigs in space was 0.0000 +/- 0.0002 g. Some individuals weighed less than zero, some more, but these variations were due to reaction to the duct tape, we believe, which caused them to be alarmed push briefly against the force plate in the balance. Individuals on the Earth, the control cohort, gained about 240 g/month ($p = 0.0002$). Males and females gained a similar amount of weight on Earth (no main effect of sex), and size at any point during the study was related to starting size (which was used as a covariate in the ANCOVA). Both Earth and space pigs developed substantial dewlaps (double chins) and were lethargic at the conclusion of the study.

CONCLUSIONS:

Our view that weight and weight gain would be zero in space was confirmed. Although we have not replicated this experiment on larger animals or primates, we are confident that our result would be mirrored in other model organisms. We are currently in the process of obtaining necessary human trial permissions, and should have our planned experiment initiated within 80 years, pending expedited review by local and Federal IRBs.

ACKNOWLEDGEMENTS:

I am grateful for generous support from the National Research Foundation, Black Hole Diet Plans, and the High Fructose Sugar Association. Transport flights were funded by SPACE-EXES, the consortium of wives divorced from insanely wealthy space-flight startups. I am also grateful for comments on early drafts by Mañana Athletic Club, Corpus Christi, USA. Finally, sincere thanks to the Cuy Foundation for generously donating animal care after the conclusion of the study.

LITERATURE CITED:

- NASA. 1982. Project STS-XX: Guinea Pigs. Leaked internal memo.
- Sekulić, S.R., D. D. Lukač, and N. M. Naumović. 2005. The Fetus Cannot Exercise Like An Astronaut: Gravity Loading Is Necessary For The Physiological Development During Second Half Of Pregnancy. *Medical Hypotheses*. 64:221-228
- Xavier, M. 1965. Elastane Purchases Accelerate Weight Gain In Case-control Study. *Journal of Obesity*. 2:23-40.



Assessing the value of real-world evidence in melanoma in health technology assessment appraisals

Samuel Llewellyn, Abigail Doe, Casey Quinn | Vitaccess, Oxford, UK

Background and Objectives

Health technology assessment (HTA) bodies are responsible for the evaluation and recommendation of new health technologies for adoption into healthcare systems and/or reassessment of existing technologies to improve patient care¹.

Relevant and available evidence from a range of sources is used for clinical and cost-effectiveness assessment of health technologies on targeted patient population treated in routine practice^{2,3}.

This analysis aimed to investigate the use of real-world data (RWD) in recent health technology assessment (HTA) appraisals for melanoma therapies in England, Canada, Australia and France.

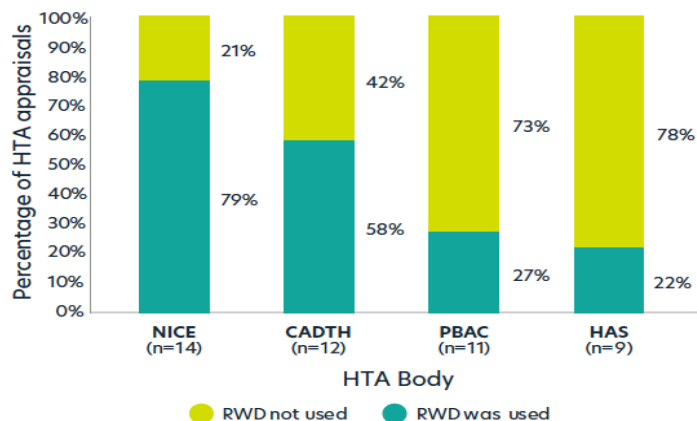
Methods

All publicly available final HTA reports from the UK National Institute for Health and Care Excellence (NICE), the Canadian Agency for Drugs and Technologies in Health (CADTH) pan-Canadian oncology drug review (pCODR), the Australian Pharmaceutical Benefits Advisory Committee (PBAC), and the French National Authority for Health (HAS) between 1st January 2011 and 30th September 2019 for melanoma therapies were identified from which the type of RWD, context of which RWD was used, assessment commentary, and reimbursement outcomes were extracted.

Results

Ten melanoma therapies (cobimetinib plus vemurafenib, dabrafenib, dabrafenib plus trametinib, encorafenib plus binimetinib, ipilimumab, nivolumab, nivolumab plus ipilimumab, pembrolizumab, talimogene laherparepvec, trametinib) were assessed in 46 final appraisal documents. RWD was used for clinical or cost-effectiveness assessment in 50% of final appraisals. RWD was for this purpose in all technology appraisals except talimogene laherparepvec and trametinib.

Figure 1: Final submissions of HTA appraisals for melanoma which contained RWD



Types of RWD that were used:



Electronic health record, registry, health survey, administrative data, non-randomized trial.

Figure 2: Sources of RWD in HTA appraisals for melanoma

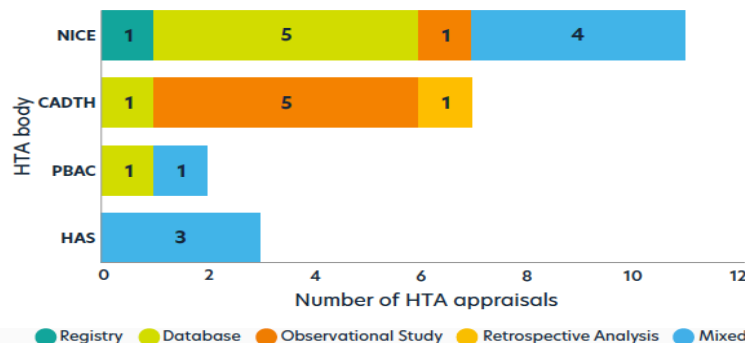


Table 1: The source of RWD for parameters used in the 2016 HTA appraisals for cobimetinib + vemurafenib for the treatment of melanoma by HTA body

	Health Resource Use	Healthcare Cost	Survival	Utility Values
NICE ⁴	Patient access scheme	Patient access scheme	×	Observational study
CADTH ⁵	×	Observational study	×	Observational study
PBAC ⁶	×	×	×	×
HAS ⁷	×	×	Surveillance, epidemiology and end results register	Observational study

Discussion and Conclusions

RWD submitted spanned retrospective and prospective observational studies, as well as medical chart reviews. The focus of these were effectiveness, costs, quality of life, and safety.

RWD was considered where prospective randomized controlled trial data was not available at the time of decision making, or where long-term survival extrapolation needed external reference points, and to determine which treatments were being used in clinical practice⁷⁻⁹.

There were cases where RWD was accepted and contributed to HTA decision making. In their assessment of ipilimumab, however, NICE specified that they did not consider that RWD studies provided additional relevant reliable data⁹.

References

A comprehensive list of the references is available upon request.

Your Title Should Fit On One Line, size 105

Name and Institution, size 63
Contact Information



Introduction, size 68

Before designing your poster, consider your goal. Are you providing information, raising awareness of an issue, changing an opinion, or something else? What is the desired effect of your message? Use your goal to guide your decisions about what is the most important information and how to display it.

Your message's effect is influenced by your audience, the environment in which it is delivered, and its design features. For example, are you presenting to experts or a mixed audience? You will need to tailor your content to suit your particular audience's values and needs. Also consider the environment: Will your poster be one in ten or one in fifty? How much do you need to stand out? Will you stand by your poster to explain it in person, or will it stand alone?

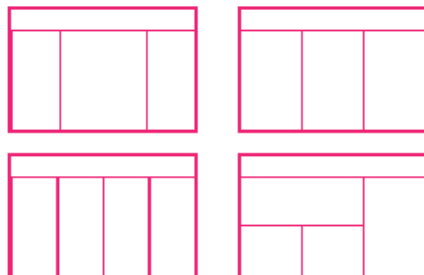


Layout

There are many different options for poster layout. Select one that allows the most important information to stand out.

Avoid the temptation to cram so much content into a space that the text has to be shrunk, or that you lose the opportunity for your viewer's eyes to relax with some negative/blank space. Consider using bullet points instead of paragraphs, or diagrams instead of wordy explanations.

Layout ideas:



Design Principles

Contrast, size 36

Use contrast in style to communicate an organized hierarchy of information and to guide your viewer's eye, size 32

- Consider using a contrasting font for your header.
- You can also use size, italics, bolding, and color coding to increase contrast between pieces of text.
- Avoid black type on darkly-colored backgrounds, or white type on light-colored backgrounds.

Repetition

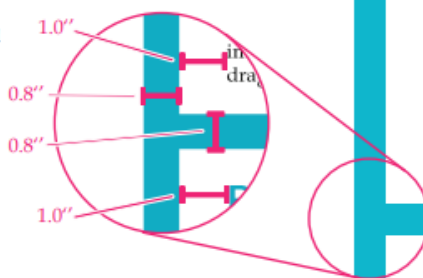
Repeat visual elements such as color, shapes, textures, borders, and fonts to unify the poster.

- Make sure all headers are the same font size.
- Make sure spacing between elements is consistent.

Alignment

Check for horizontal and vertical alignment.

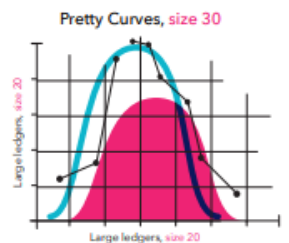
By zooming in 100% or more, you can more easily check margins as well as inter-marginal space. White padding around text makes it easier to read.



Proximity

Placing elements close together creates a relationship between them. Try to create visual units using close proximity. For example, the image above goes with 'Alignment' not 'Proximity' because it is slightly closer to the alignment text.

Enclosures also help create relationships. If you have a lot of information consider adding white boxes or outlines to delineate information. Proximity is especially important for graphs. Make sure you give graphs and charts enough space above and below them.



Software Options



Adobe InDesign

If you have time, learn it. InDesign is the best for layout, text, and image handling.



Adobe Illustrator

A good alternative to InDesign. Illustrator has great alignment tools and working with layers makes designing posters much easier.



PowerPoint / Google Slides / Keynote

You can do a lot with slideshow programs! But, some have limited alignment tools.

Images

Use images 300dpi or larger. If using another person's image, make sure to cite the source.



To proportionately scale an image, press and hold shift while dragging a corner.

Resources

DesignLab Resources Webpage
<https://designlab.wisc.edu/resources>

Designing Conference Posters: Blog post by Colin Purrington
<http://colinpurrington.com/blog/poster-design>

This is size 16. Be okay for citing your sources but don't use this size font for anything else!

Acknowledgments

If you need any help with your poster—from the first concept to final revisions—connect with the DesignLab!



Other Information



Setup: Thursday, Oct. 31: 12pm -7pm Eastern Time

Present: Friday, Nov. 1: 2:20pm – 4pm ET

Take down: Friday, Nov. 1: 4pm – 5pm ET

Poster Awards presentation: Saturday, November 2: 12:30 – 12:40 pm ET

- Check current airline rules regarding handling your poster as luggage, or check rules regarding conference poster shipment guidelines. Most poster carriers will not meet carry-on restrictions
- Wear comfortable shoes
- HAVE FUN! - Look upon the experience as one of the most pleasant, low-pressure ways to present your work and meet colleagues who may further your work

Helpful websites



- <https://colinpurrington.com/tips/poster-design/>
- <https://colinpurrington.com/tips/poster-design/#templates>
- <http://justinlmatthews.com/posterhelp/posterguide/>
- <https://www.makesigns.com/tutorials/scientific-poster-parts.aspx>
- <https://www.organizingcreativity.com/2012/04/conference-posters/>
- https://www.makesigns.com/SciPosters_Templates.aspx