Please take pre-survey: Rate your ability to effectively communicate your work to its target audience

Making Your Key Messages Heard and Understood: Strategies and Methods for Effective Communication of Scientific Information to Non-technical Audiences

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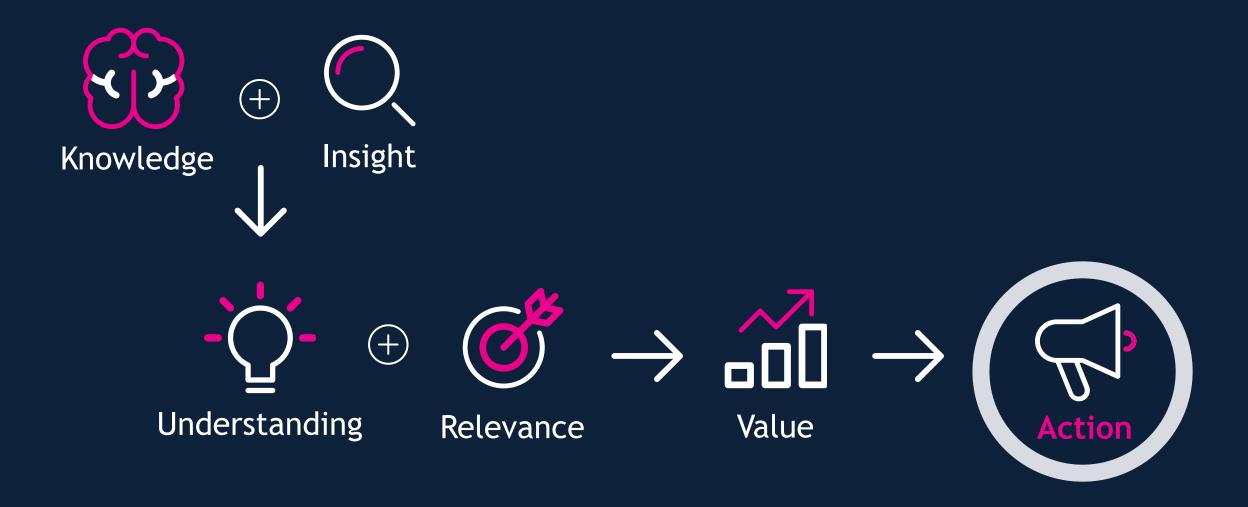
We communicate to diverse audiences with the goal of persuasion and to inspire action

We usually want the audience to do or believe something differently





Action-inspiring communications are possible only when the audience values the information





In this workshop you will learn...

- Core components to effective and efficient communication
- Evidence-based strategies for making communications easier to understand
- Non-conventional tools to make data more understandable and actionable by non-technical audience



What is communication?

The efficient and effective transfer of experiences, insights, and know-how





What are the challenges we face when communicating?

Barriers to effective communication

1. Failing to include all the information people need to know



All relevant facts is a necessary but insufficient condition for achieving communication goals

Effective communication helps the audience understand the relevance of the work - from their perspective





Effective communication helps the listener understand the relevance - from their perspective

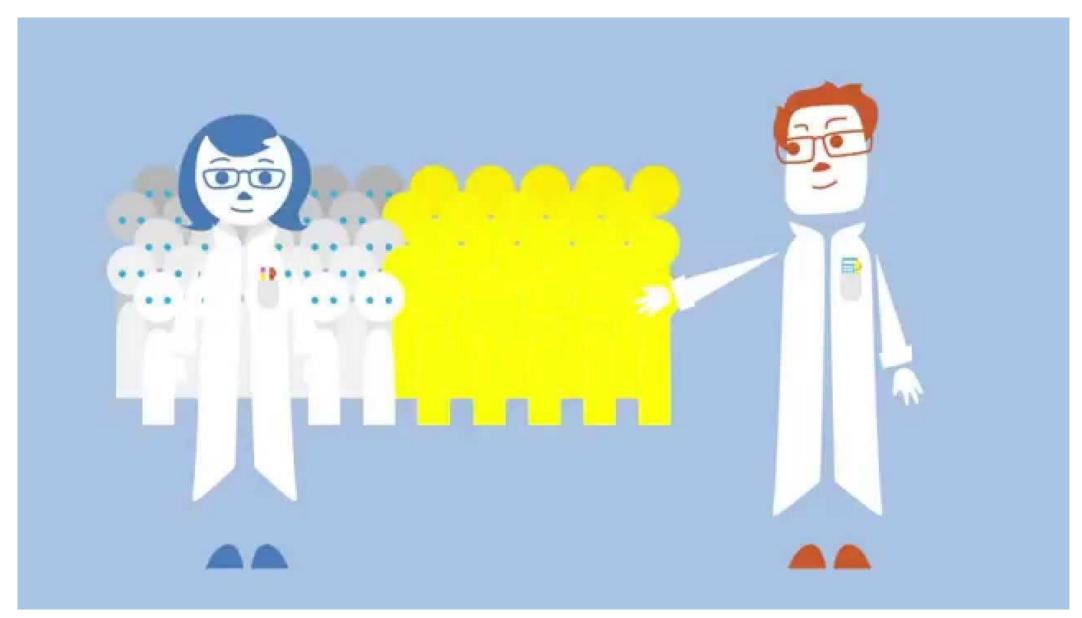


Once you know something, it is hard to remember what it was like before

The 'Curse of Knowledge' impairs your ability to predict how much knowledge others have, leading you to assume they know more than they do

- You have thorough understanding of your own work, whereas others are relative novices
- Aversion to 'dumbing down' work or insulting the audience's intelligence
- Failure to notice any implicit knowledge you have that the audience doesn't
- As a result, you may not present your explanation at the level of detail that would be most helpful





https://youtu.be/rPAryjQs-Pw



Barriers to effective communication

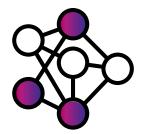
- 1. Failing to include all the information people need to know
- 2. Including more information than is necessary



"If you can't explain it simply, you don't understand it well enough" Albert Einstein

- The 'deficit' mindset: The lack of facts is the barrier between the audience and the desired communication outcome... "If they only knew what I know!"
- Giving a laundry list of facts and details thinking it provides greater transparency ... Let the audience decide and the speaker cannot be accused of cherrypicking

When faced with information overload the audience may...



- Rely on quick assessment of whether the information fits with what they already know
- Decline to engage



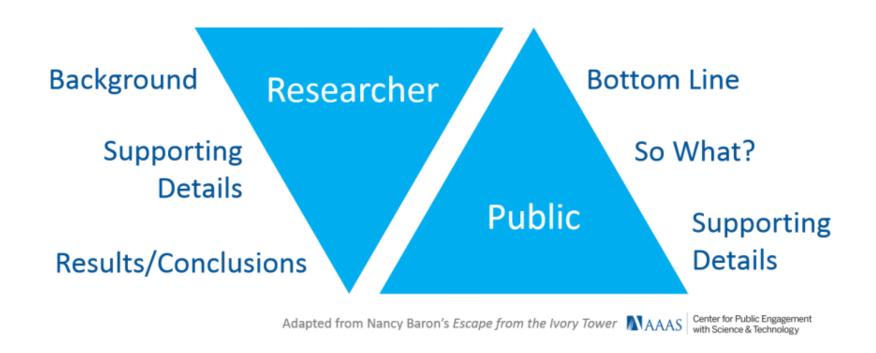
Barriers to effective communication

- 1. Failing to include all the information people need to know
- 2. Including more information than is necessary
- 3. Poorly prioritized information



The structure of the information helps with accessibility

- Most people don't care about content that is not immediately compelling
- To capture their attention, start with the bottom line in a way that is relevant to the audience and then share more details





Barriers to effective communication

- 1. Failing to include all the information people need to know
- 2. Including more information than is necessary
- 3. Poorly prioritized information
- 4. Language with excessive jargon or is overly complex



Research shows the consequences unnecessary complexity

APPLIED COGNITIVE PSYCHOLOGY

Appl. Cognit. Psychol. 20: 139–156 (2006) Published online 31 October 2005 in Wiley InterScience (www.interscience.wiley.com) DOI: 10.1002/acp.1178

Consequences of Erudite Vernacular Utilized Irrespective of Necessity: Problems with Using Long Words Needlessly

DANIEL M. OPPENHEIMER*

Princeton University, USA



Experiment 1: Does increasing the complexity of text succeed in making the author appear more intelligent?

- Stanford University undergraduates rated 6 personal statements for admissions to graduate studies in English Literature
- Texts were modified from their originals to create a 'highly complex' and 'moderately complex' version by replacing nouns, verbs, and adjectives with longer synonyms

Increasingly complex essays were rated more negatively than equivalent simpler texts

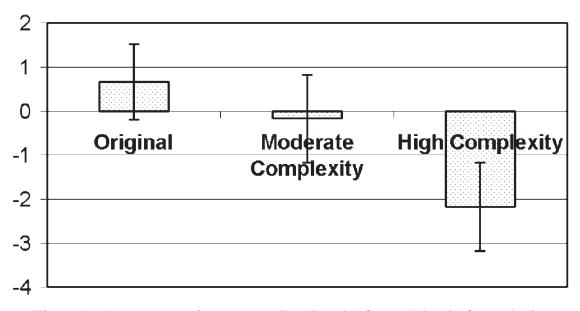
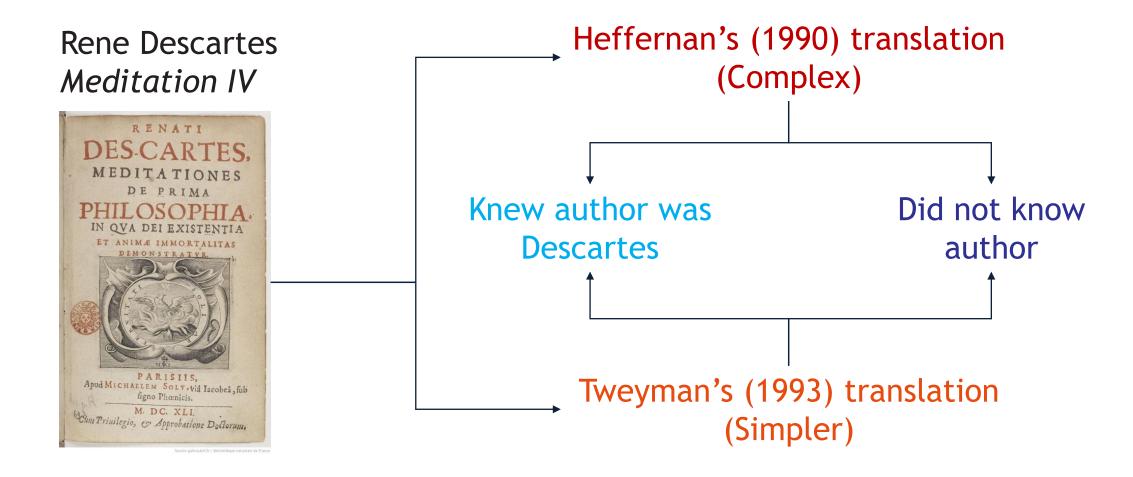


Figure 1. Acceptance ratings (on a -7 to 7 scale) for each level of complexity

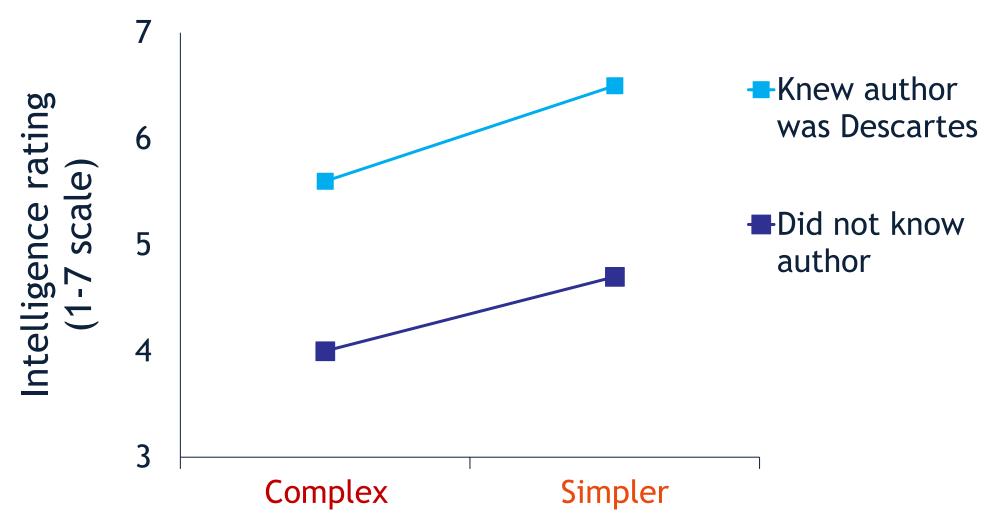


Experiment 2: 39 participants rated author intelligence based on two translations





Complexity negatively influenced raters' assessments of Descartes' intelligence!





Experiment 4: Difficult presentation also affects intelligence ratings

Participants were given **instructions and an admission essay** written in one of two fonts and asked to rate the intelligence of the author on a 7-point scale

4.04

An example of what text looks like in italicized Juice ITC 12 point font

An example of what text looks like in Times New Roman 12 point font

4.50

Even though raters knew font selection was made by the experimenters and not the authors



Key takeaway: 'Write clearly and simply if you can, and you'll be more likely to be thought of as intelligent'



Excerpt from plainlanguage.gov

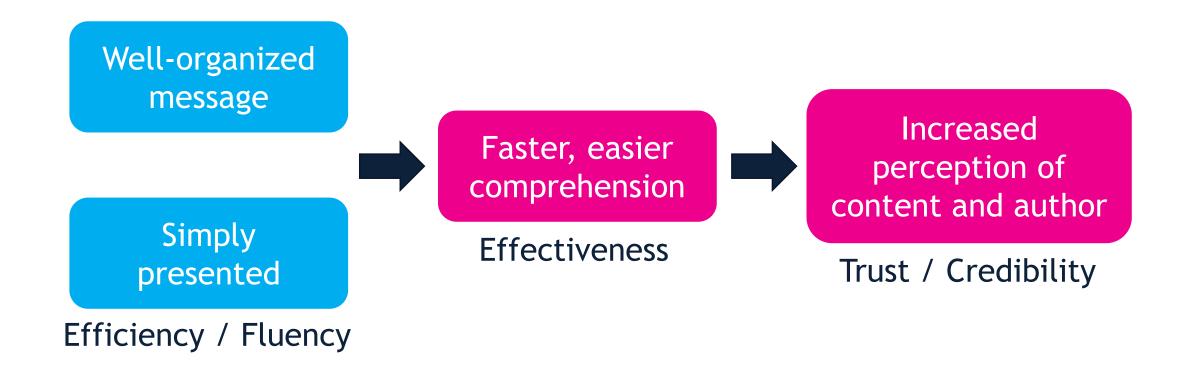
When we say not to use jargon, we're not advocating leaving out necessary technical terms, but we are saying to make sure your language is as clear as possible.

For example, there may not be another correct way to refer to a 'brinulator valve control ring.' But that doesn't prevent you from saying 'tighten the brinulator valve control ring securely' instead of 'Apply sufficient torque to the brinulator valve control ring to ensure that the control ring assembly is securely attached to the terminal such that loosening cannot occur under normal conditions.'

The first is a necessary use of a technical term. The second is jargon.



Simplicity and ease of presentation lower the cognitive burden on the listener





Barriers to effective communication

- 1. Failing to include all the information people need to know
- 2. Including more information than is necessary
- 3. Poorly prioritized information
- 4. Language with excessive jargon or is overly complex
- 5. Audience challenges



Audiences have unique challenges that create barriers to attention

Listener

Insufficient technical knowledge

Lack of attention and concentration

Extreme time constraints, inadequate communication infrastructure, distractions

Situation



What strategies can improve communication?

Communications that understand people's challenges with numeracy are more effective

nu·mer·acy: the ability to understand and work with numbers

- Many people have difficulty understanding the quantitative and probabilistic information that frequently is the language of HEOR
- Problems with numeracy frequently affect even scientists outside of their areas of expertise

Provide the numbers, don't avoid them

Reduce cognitive effort by making inferences explicit

Explain what the numbers mean

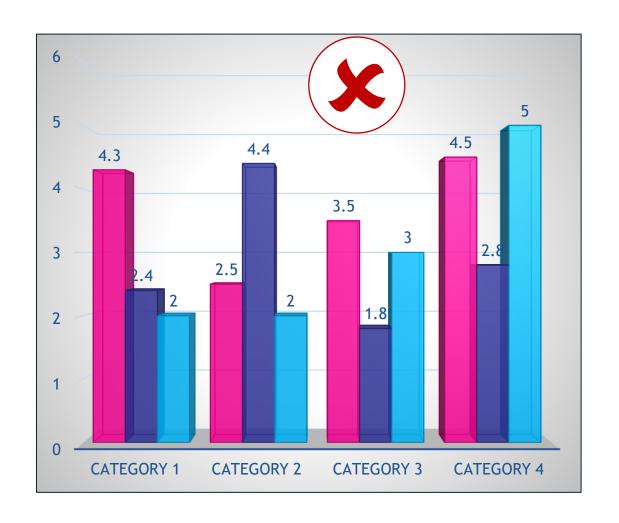
Draw particular attention to important information

National Academies of Sciences, Engineering, and Medicine 2017. Communicating Science Effectively: A Research Agenda. Washington, DC: The National Academies Press



Institute of Medicine. (2014). Numeracy and the Affordable Care Act: Opportunities and challenges. In E. Peters, L. Meilleur, and M. K. Tompkins (Eds.), Health Literacy and Numeracy: Workshop Summary (Appendix A). Washington, DC: The National Academies Press.

Make numeric information easier to understand: Avoid markings that do not convey information

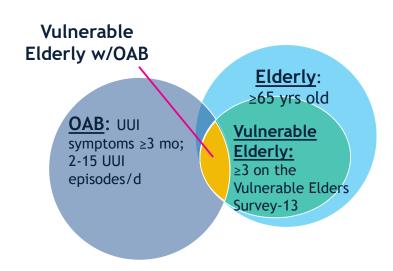






Use hierarchy, order, and consistency to your advantage

- What is most important should be recognizable first
- Order bars of charts by value
- Create order with consistent coloring and directionality for common elements
- Represent mathematical concepts visually



100,000 elderly plan members* VS. 52.4% vulnerable elderly* 13.5% prevalence of OAB among vulnerable elderly



Seeing is believing acting

Visuals are more powerful tools to inspire action

Our Brain's Visual Cortex Has Decision-Making Power

Neuroscientists discovered that the part of the brain responsible for seeing could also make interpretations without help from the traditional "higher level" areas.

Rotating Photo of Salad Gets Elementary Schoolers to Eat Their Veggies

Salad consumption among campers aged 6-12 increased as much as 90 percent when a digital display showed a rotating image of the salad.



Use narratives to frame your work and results

- In particular, audiences with lower numeracy are more likely to respond to narratives, which are explanations that are presented as stories
- Our minds treat stories differently than other types of material
- A meta-analysis of 75 studies found that narrative stories were more easily understood and better recalled than essays



Humans are wired to listen to stories



Framework for creating a narrative

PROBLEM

- What is wrong with the status quo or current situation?
- Frame the problem in a way that inspires the listener to care about what you have to say

QUESTION

- What question is motivated by the problem framed to the perspective of the listener?
- Also called the "research question" or "objective"

ANSWER

- The answer to this question
- Followed by the evidence supporting the answer



Real-world Case studies

Non-conventional tools to make data more understandable and actionable by non-technical audience

Disclosures

Ali Alobaidi, PharmD, MS

- Employee of AbbVie and may own stocks/shares in the company
- The information included in this presentation are speaker's own opinions and may not represent those of AbbVie

We all love the dynamic duo!



The "dynamic duo"

Conference presentation

Journal manuscript

Great for documentation, but a lot of effort is required on the part of the audience to understand their insights



But what can be done beyond a publication?



The "dynamic duo"

Conference presentation

Journal manuscript

Great for documentation, but a lot of effort is required on the part of the audience to understand their insights



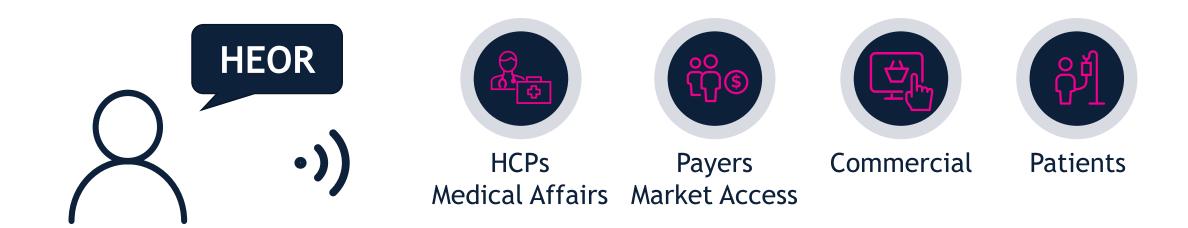
Companion
Digital Features

Novel
Dissemination
Channels

Non-conventional tools to expand research exposure for broad spectrum of audiences



Know your audience!



Opportunities

Which format is accessible and preferred? What level of details is optimal? What messages resonate the most?

Risks

Time restraints in day-to-day activities Sufficient clinical and technical knowledge Unsolicited information (spamming)



Enhance your publications with video or audio summaries

Video and audio summaries



Abstract

Introduction: Levodopa/carbidopa intestinal gel (LCIG; carbidopa/levodopa enteral suspension) has been widely used and studied for the treatment of motor fluctuations in levodopa-responsive patients with advanced Parkinson's disease (PD) when other treatments have not given satisfactory results. Reduction in 'off'-time is a common primary endpoint in studies of LCIG, and it is important to assess the durability of this response. This systematic literature review was conducted to qualitatively summarise the data on the long-term effects of LCIG therapy on 'off'-time.

Methods: Studies were identified by searching PubMed, EMBASE and Ovid on 30 September 2019. Studies were included if they reported on patients with PD, had a sample size of ≥ 10, LCIG was an active intervention and 'off'-time was reported for ≥ 12 months after initiation of LCIG treatment. Randomised clinical trials, retrospective and prospective observational studies, and other interventional studies were included for selection. Data were collected on: 'off'-time (at pre-specified time periods and the end of follow-up), study characteristics, Unified Parkinson's Disease Rating Scale (UPDRS) II, III and IV total scores, dyskinesia duration, quality of life scores, non-motor symptoms and safety outcomes.

Results: Twenty-seven studies were included in this review. The improvement in 'off'-time observed shortly after initiating LCIG was maintained and was statistically significant at the end of follow-up in 24 of 27 studies. 'Off'-time was reduced from baseline to end of follow-up by 38-84% and was accompanied by a clinically meaningful improvement in quality of life. Stratified analysis of 'off'-time demonstrated mean relative reductions of 47-82% at 3-6 months and up to 83% reduction at 3-5 years of follow-up. Most studies reported significant improvements in activities of daily living and motor complications. Most frequent adverse events were related to the procedure or the device.

Conclusion: In one of the largest qualitative syntheses of published LCIG studies, LCIG treatment was observed to provide a durable effect in reducing 'off'-time.



Published Video Abstract



Video Poster Presentation

The patient burden of advanced PD includes dyskinesia, non-motor symptoms, and mood and sleep impairments

- These symptoms impair patient functioning and well-being and present challenges for the management of advanced PD (APD)^{1,2}
- Improvements in dyskinesias and non-motor symptoms are associated with improved quality of life for patients and their caregivers³⁻⁵
- Levodopa-carbidopa intestinal gel (LCIG) is a stable gel suspension suitable for continuous delivery through percutaneous gastrojejunostomy via a portable pump⁶ and has been reported to reduce motor fluctuations in clinical trials³

OBJECTIVE

Evaluate the impact of LCIG on dyskinesia, non-motor symptoms, sleep/daytime sleepiness, and mood in APD patients over 24 months after initiation



Source: https://link.springer.com/article/10.1007/s12325-021-01747-1; www.mdsabstracts.org/abstract/effects-of-levodopa-carbidopa-intestinal-gel-on-dyskinesia-and-non-motor-symptoms-including-sleep-results-from-a-meta-analysis-with-24-month-follow-up/">https://link.springer.com/article/10.1007/s12325-021-01747-1; <a href="https://www.mdsabstracts.org/abstract/effects-of-levodopa-carbidopa-intestinal-gel-on-dyskinesia-and-non-motor-symptoms-including-sleep-results-from-a-meta-analysis-with-24-month-follow-up/



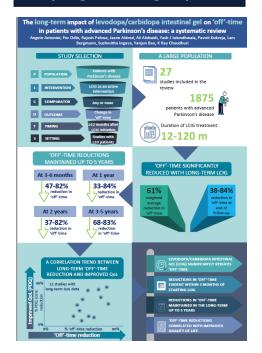
Leverage Infographics and Plain Language Summaries to distill scientific information for diverse audiences

- Video and audio summaries
- Infographics and lay language summaries



HCPs Payers Commercial Patients Medical Affairs Market Access

1-page Infographic



Lay Summary

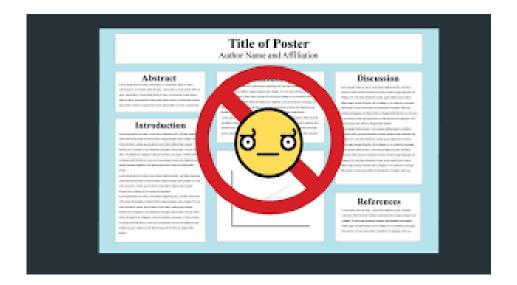
PLAIN LANGUAGE SUMMARY

By synthesising publications from scientific journals, this article shows that levodopa/carbidopa intestinal gel (LCIG; also known as carbidopa/levodopa enteral suspension or the tradenames Duodopa® and Duopa®) may have benefits for patients with advanced Parkinson's disease that last for 12 months or more. Pills taken by mouth for Parkinson's disease often do not work as well after a few years. This means the symptoms of Parkinson's disease, such as shaking or slow movements, etc., re-emerge despite medication (known as 'off'-time). To reduce the amount of 'off'-time, people with advancing Parkinson's disease may switch from pills to other types of treatments, for example, those that use devices to deliver the drug into the body, such as LCIG. LCIG has been available for many years and is known to help patients by reducing 'off'-time. Despite this, less is known about how long the benefits of LCIG last. By summarising all information available on the long-term use of LCIG, this report shows that when patients have been taking LCIG for at least 12 months, they have 2-4 h less 'off'-time each day than they did before starting the LCIG treatment. This effect is maintained for 3-5 years after starting LCIG treatment. There were no unexpected side effects with long-term use of LCIG. The time not spent in 'off' may allow people with advanced Parkinson's to increase their independence in daily activities.



#BetterPoster Templates

- Video and audio summaries
- Infographics and lay language summaries
- Revamped poster templates







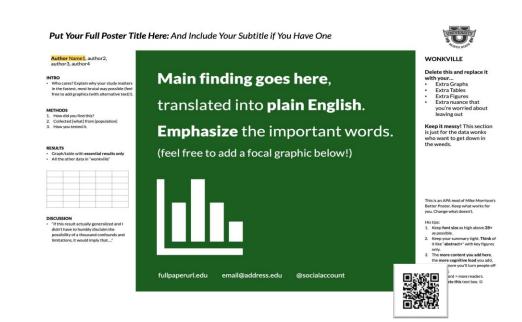




Medical Affairs Market Access

Commercial

- > Emphasis on the main findings and impact
- Tailored level of background information





Tables 1 vs Figure 1? What's the real estate value?

- Video and audio summaries
- Infographics and lay language summaries
- Revamped poster templates
- Efficient use of visuals

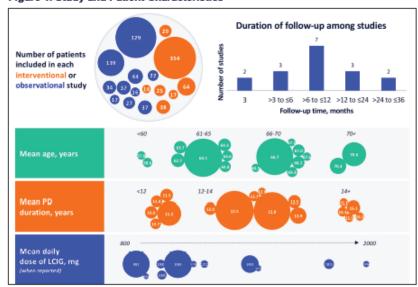
Author, Year	Data Source(s) ^a	Study Characteristics			Patient Baseline Characteristics, Mean (SD)				Patient Scores at Baseline, Mean (SD)						
		Study Design	Follow- up, mo ^b	ITT, N	Age, y	PD Duration, y	Daily L-dopa Dose, mg	Hoehn and Yahr Score	UPDRS IV Item 32, h/d	UPDRS IV Items 32-34	UDysRS	NMSS	UPDRS I	PDSS-2	ESS
DUOGLOBE 2020	Publication, CSR [28, 53]	Global, multicountry, single-arm, post- marketing observational analysis	36	164	70.2 (8.17)	11.2 (4.72)	1432 (101.82)	On: 3 (0.83) Off: 3.6 (0.8)	4.1 (3.7)	NA	33.7 (21.14)	88.2 (51.09)	NA	26.6 (11.65)	9.8 (5.26)
Alvarez 2020	Publication, CSR [54, 55]	Open-label, randomized, multicenter interventional study	3	25	69.3 (7.0)	12.7 (4.2)	1211.5 (374.89)	NA	NA	NA	53.2 (12.24)	NA	NA	NA	NA
Antonini 2017	Publication, CSR [27, 56]	Observational non- interventional	24	Retrospective: 140	67.4 (8.1)	12.6 (6.6)	854.8 (513.3)	On: 2.9 (0.8) Off: 4.1 (0.8)	4.1 (3.7)	NA	NA	76.2 (47.9)	NA	NA	NA
				Prospective: 189	66.1 (8.5)	13.0 (6.1)	899.7 (474.7)	On: 2.8 (0.8) Off: 3.9 (0.9)	4.4 (3.8)	NA	NA	66.5 (39.6)	NA	NA	NA
Caceres- Redondo 2014	Publication [57]	Observational	24	16	66.5 (9.3)	15.1 (5.4)	1473.0 (449.0)	On: 2.4 (0.5) Off: 3.7 (0.8)	NA	NA	NA	17.3 (4.7)	NA	NA	NA
De Fabregue s 2017	Publication [34]	Long-term, open- label, prospective, observational	12	37	68.2 (6.8)	13.5 (5.6)	NA	On: 2.5 Off: 3.8	NA	NA	NA	NA	3.2 (2.4)	NA	5.6 (3.6)
Fasano 2012	Publication [46]	Phase III, open-label	24.9 (14.4)	14	67.1 (11.5)	12.9 (4.8)	929.1 (682.2)	NA	NA	NA	NA	126 (56.18)	8.71 (3.1 5)	39.08 (8.58)	NA
Fernandez 2015	Publication, CSR, trial registry [58-60]	Phase III, open-label	12	354	64.1 (9.1)	12.5 (5.5)	1082.9 (582.1)	NA	NA	3.7 (2.4)	NA	NA	2.2 (1.9)	NA	NA
Honig 2009	Publication [25]	Prospective open- label observational	6	22	58.6 (9.1)	15.3 (5.9)	NA	Off: 3.8	NA	NA	NA	89.9 (56.5)	NA	NA	NA





- > Focus on key insights
- Easier to contextualize study findings

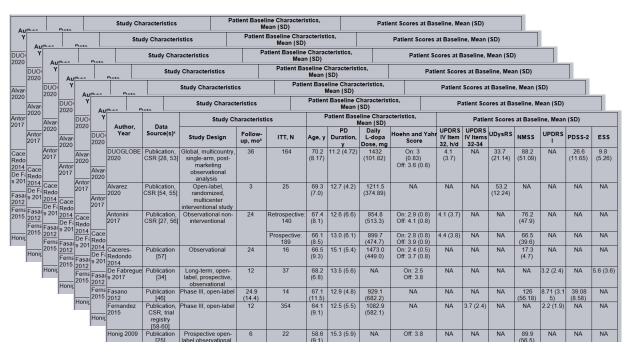
Figure 1. Study and Patient Characteristics





Interactive appendices and dashboards. Rethinking the way we present supplemental material...

- Video and audio summaries
- Infographics and lay language summaries
- Revamped poster templates
- Efficient use of visuals
- Interactive data dashboards

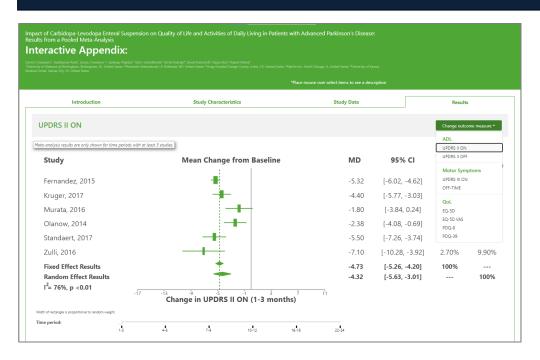




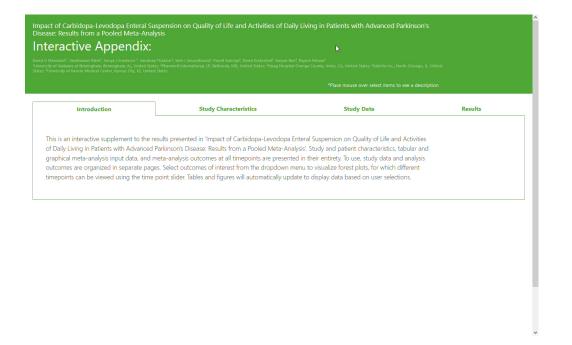


Interactive appendices and dashboards. Rethinking the way we present supplemental material...

- > Enhance audience engagement with data
- More understandable than lots of tables









Leverage a multi-channel approach to promote your research

Virtual manuscript reprints

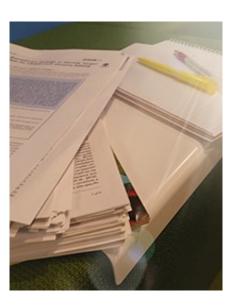




- Commercial



> Full publication in readily accessible format



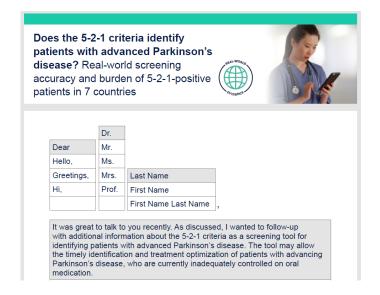


Figure 2. Frequency of falls, hospitalization and dissatisfaction with treatment in 5-2-1 positive patients compared with 5-2-1 negative patients



· Potential study limitations include: the acceptance of physician opinion of disease severity as the reference; the reliance on patient self-reports to capture data on falls and physician consultations; the only measures of HCRU being hospitalization rate, physician consultations and amount of caregiver help; the absence of an evaluation of indirect treatment costs and productivity losses:

CONCLUSIONS

- The study demonstrated the robust screening performance of the 5-2-1 screening criteria in recognizing patients with advanced PD who are suboptimally controlled on oral PD medications.
- There is an increased clinical, humanistic and HCRU burden experienced by
- The 5-2-1 screening criteria represent a tool that is simple to use and
- The 5-2-1 screening criteria provide an objective and reliable tool that may aid in the timely identification and treatment optimization of patients who are inadequately controlled on oral PD medications.

CLICK HERE TO VIEW FULL TEXT



Leverage a multi-channel approach to promote your research

- Virtual manuscript reprints
- Dissemination through social media



> Expand research exposure to broad audience







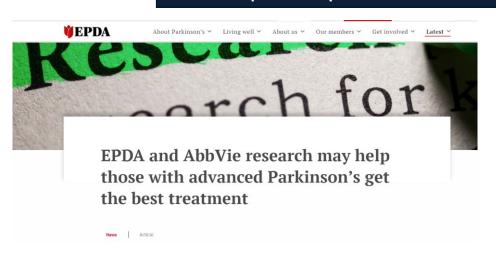
Leverage a multi-channel approach to promote your research

- Virtual manuscript reprints
- Dissemination through social media
- Dissemination through patient advocacy groups (PAG)

HCPs Payers
Medical Affairs Market Access

Commercial Patients

- > Highlight research impact for patients
- > Incorporate patient voice through PAG partnerships





Source: <a href="www.epda.eu.com/latest/news/epda-and-abbvie-research-may-help-those-with-advanced-parkinsons-get-the-best-treatment/?utm_source=EPDA+News_News&utm_medium=LinkedIn&utm_campaign=Information+%26+Education_https://www.pmdalliance.org/2020/08/31/parkinsons-research-article-round-up/_



Tailor dissemination approach to ensure scientific information is accessible and actionable by your audience













Patients



Wrap-up

ISPOR 2022

May 15-18, 2022



Please take post-survey:

- 1. I may not be as good at effective communication as I thought
- 2. I learned something that I can use in my own work
- How are you navigating this virtual era?
- What tools are you leveraging to make the "dynamic duo" more accessible and actionable by diverse audiences?



Share your insights!
SonyaSnedecor@openhealthgroup.com