Tips for improving your medical writing

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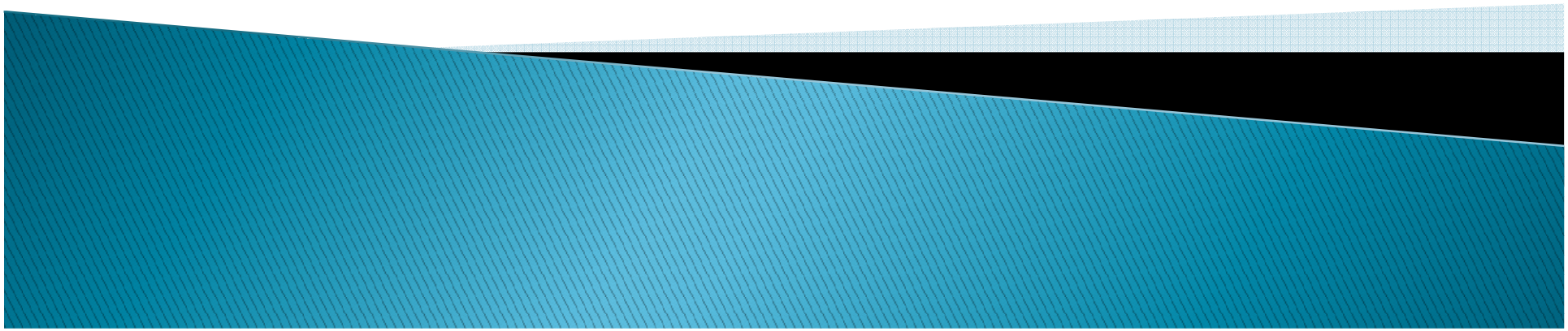
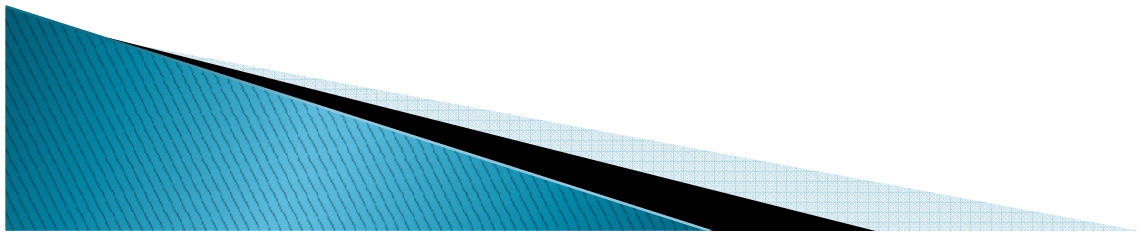


"Say all you have to say in the fewest possible words, or your reader will be sure to skip them; and in the plainest possible words or he will certainly misunderstand them"

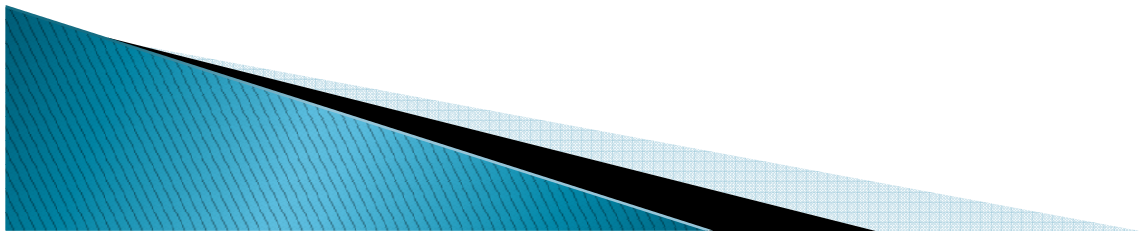
John Ruskin (1819–1900)

Art critic, author, and poet

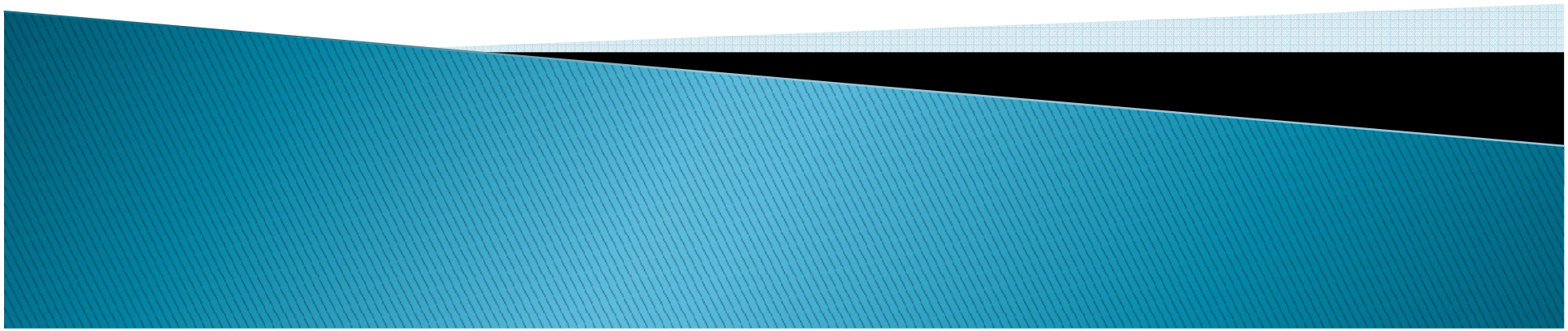


Tips for improving your medical writing

Be precise
Be concise
Be accurate and clear
Be correct
Be organised
Write for your target audience



Be precise

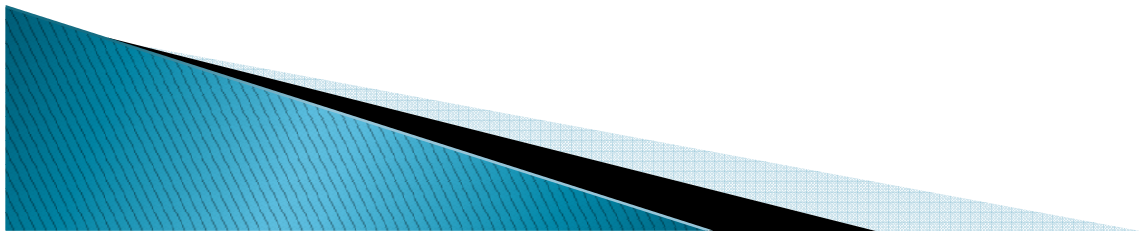


"When I use a word....it means just what I choose it to mean – neither more nor less."

Humpty Dumpty in Through the Looking Glass, by Lewis Carroll

In scientific and medical writing precision is the most important goal of language

- choosing the right words
- choosing the correct level of detail



What's in a word?

affect *verb* meaning to influence

principal *noun or adjective* meaning most important

dose quantity administered at one time

examine: patients, animals and slides are examined

effect *noun* means result *or verb* to bring about

principle *noun* meaning a law

dosage regulated administration of doses

evaluate: conditions and diseases are evaluated

effect/affect

Although we gave penicillin and terramycin, the drugs had little _____. The _____ of the treatment was minimal.

In double-blind experiments, researcher bias does not _____ experimental results.

Digestion has the _____of converting the substrate to short-chained peptides.

effect

effect

affect

effect

Adapted from Successful Scientific Writing by JR Matthews and RW Matthews ISBN 978-0-521-69927-3

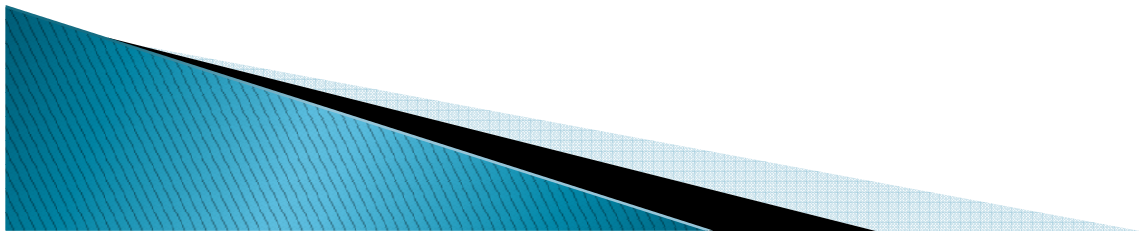
Compared with or compared to?

- *Compared with* when looking for differences between things

  80% of patients in the Wonderdrug group reported no loss of activity *compared with* 50% of patients in the placebo group

- *Compared to* when saying something is like something else

  "Shall I *compare* thee *to* a summer's day?"



Singular or plural?

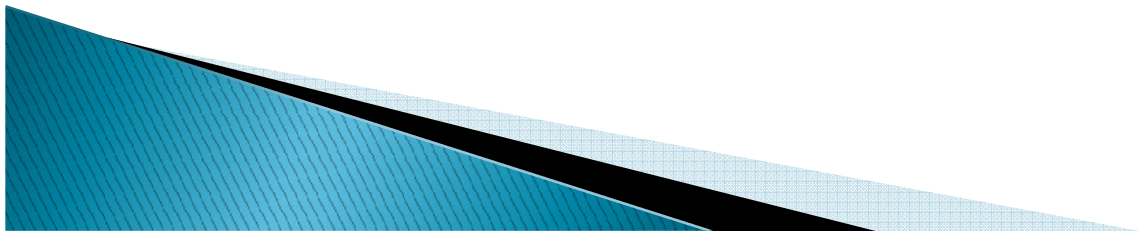
phenomenon	phenomena
stratum	strata
criterion	criteria

singular form	plural form

Level of detail important

- precision is influenced by the level of detail

need to choose an appropriate level of detail



Choosing the appropriate level of detail

Achieve a balance between

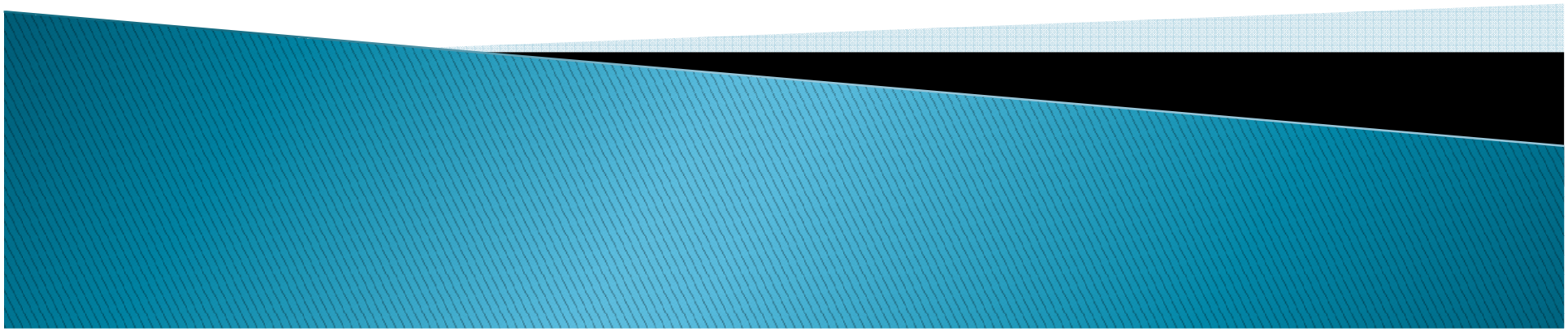
- general statements
  - establish a direction of thought

.. .extent of undiagnosed clinically significant COPD in England, and the characteristics of this population have been investigated...

- specific detail
  - gives evidence to support the direction

....identified 20,496 participants aged ≥30 years with valid lung function measurements. Of these, 971 (4.7%) were defined as having clinically significant COPD, 840 (86.5%) of whom had no previous diagnosis. Undiagnosed cases were more likely to be female, and smoke less. Overall, 25.3% of undiagnosed cases had severe disease (FEV_1 <50% predicted), 38.5% had Medical Research Council grade 3 dyspnoea and 44.1% were current smokers....

Be concise accurate and clear



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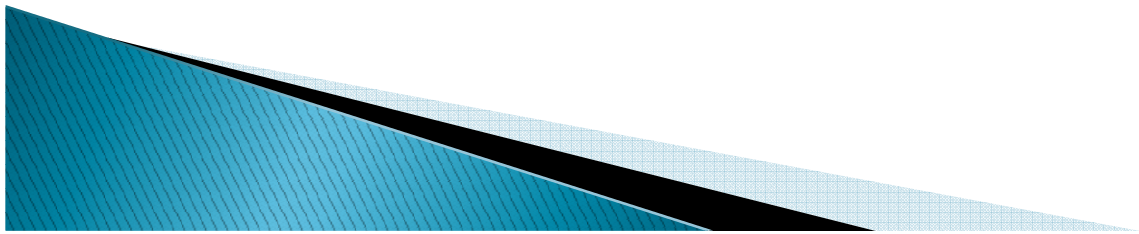
ALL THE PARTS ARE KNOWN CARCINOGENS.
"MAKES YOU APPRECIATE LIFE!"

- Avoid things you don’t mean!
- Avoid more complexity than you need!



“Don't use words too big for the subject. Don't say "infinitely" when you mean "very"; otherwise you'll have no word left when you want to talk about something really infinite”

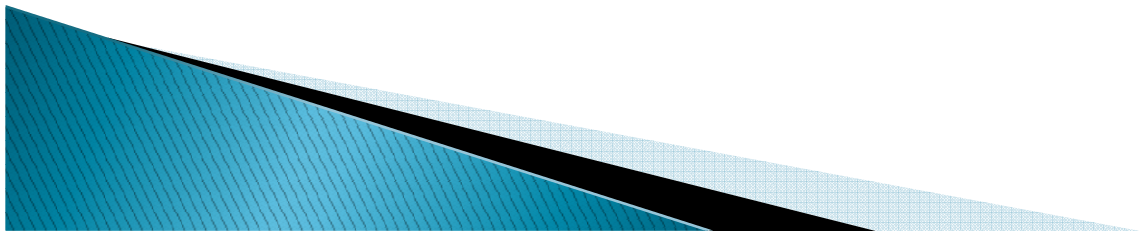
CS Lewis (1898 –1963)

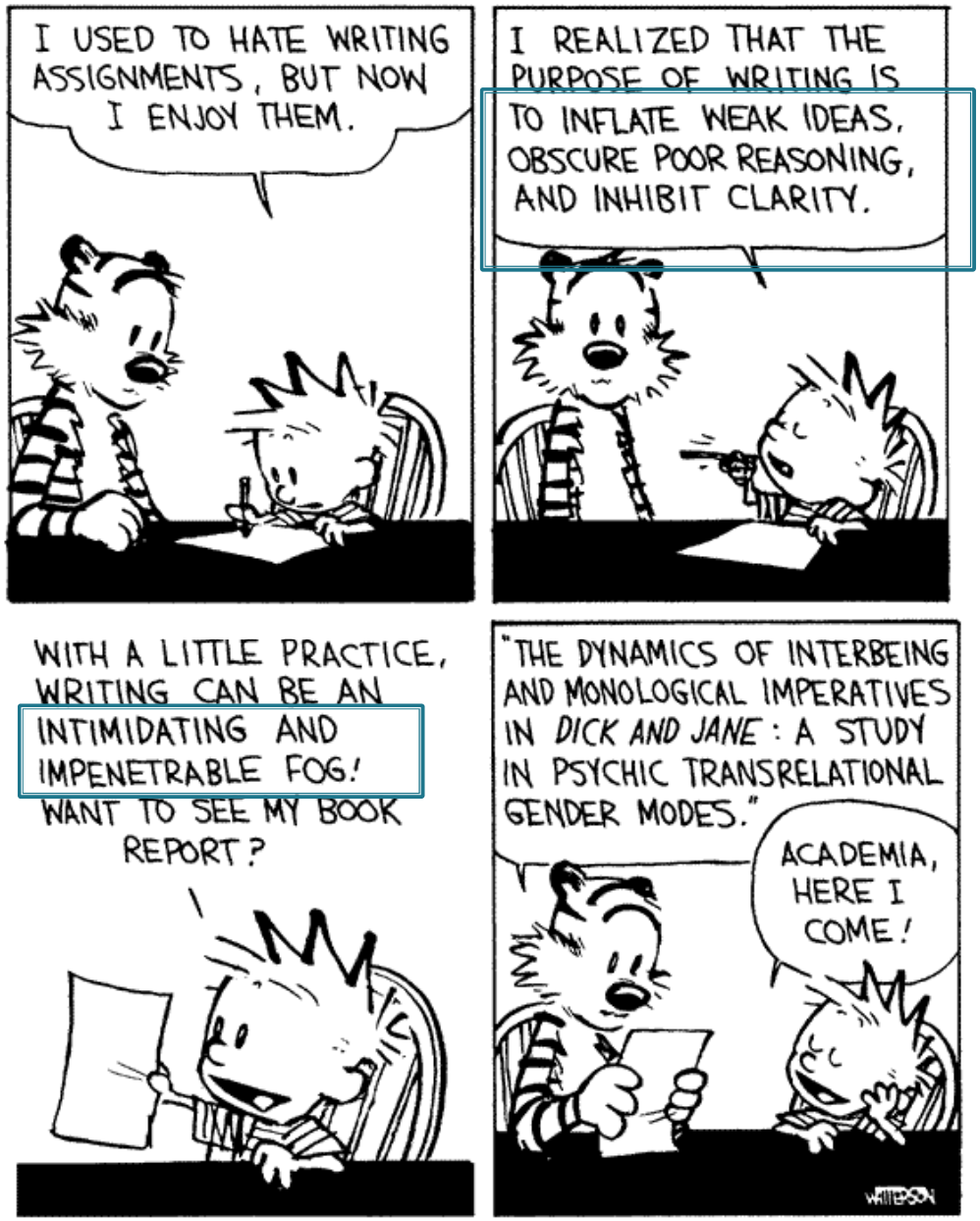
Excess wordiness	Becomes
It would appear that…	Apparently..
In light of the fact that..	Because..
It is this that..	This..
It is often the case that..	Often..

Remember:

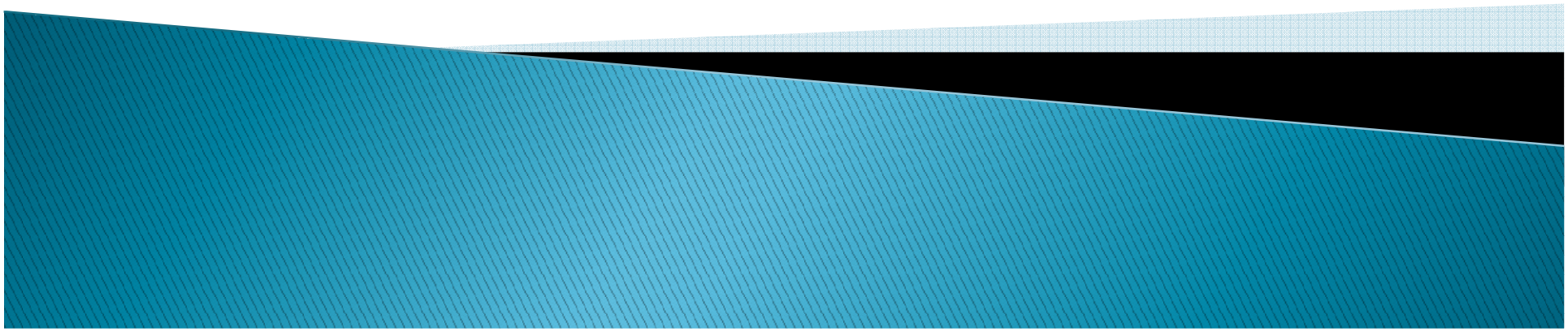
A medical writer is communicating complex ideas to different audiences.....

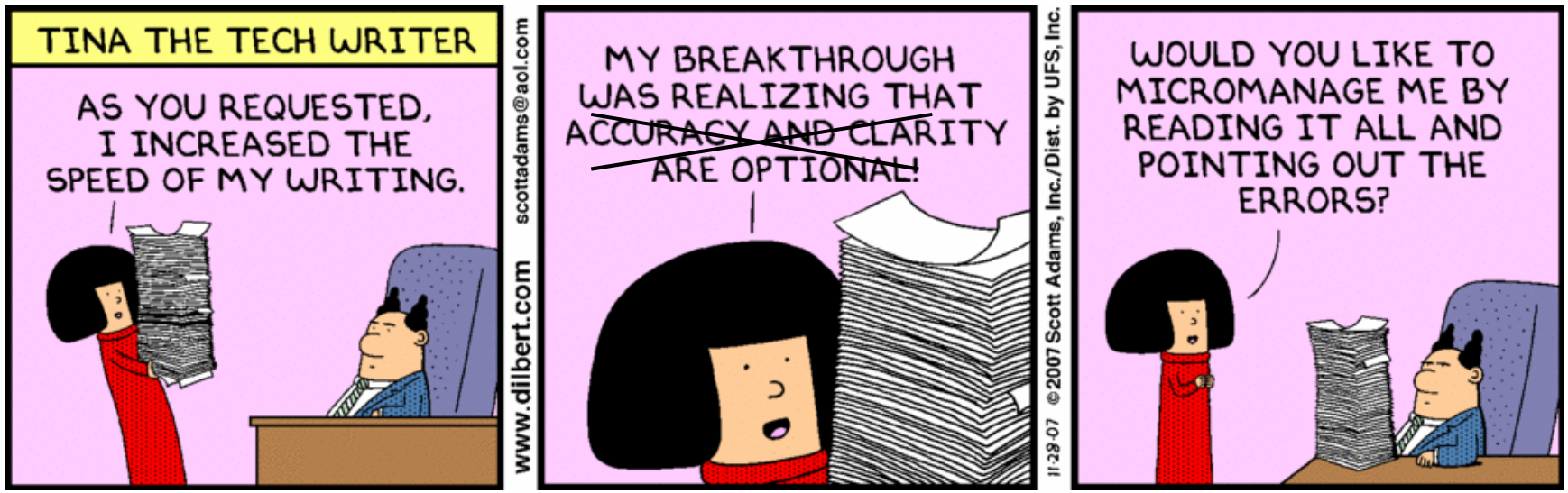
.....the language is not there to impress and confuse the reader




I USED TO HATE WRITING ASSIGNMENTS, BUT NOW I ENJOY THEM.
I REALIZED THAT THE PURPOSE OF WRITING IS TO INFLATE WEAK IDEAS, OBSCURE POOR REASONING, AND INHIBIT CLARITY.
WITH A LITTLE PRACTICE, WRITING CAN BE AN INTIMIDATING AND IMPENETRABLE FOG! WANT TO SEE MY BOOK REPORT?
"THE DYNAMICS OF INTERBEING AND MONOLOGICAL IMPERATIVES IN *DICK AND JANE*: A STUDY IN PSYCHIC TRANSRELATIONAL GENDER MODES."
ACADEMIA, HERE I COME!
WATTERSON

Be correct



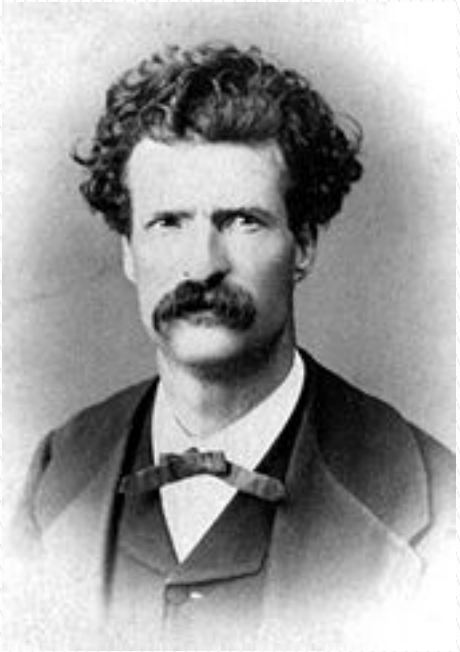

TINA THE TECH WRITER
AS YOU REQUESTED, I INCREASED THE SPEED OF MY WRITING.
www.dilbert.com scottadams@aol.com
MY BREAKTHROUGH WAS REALIZING THAT ACCURACY AND CLARITY ARE OPTIONAL!
11-28-07 ©2007 Scott Adams, Inc./Dist. by UFS, Inc.
WOULD YOU LIKE TO MICROMANAGE ME BY READING IT ALL AND POINTING OUT THE ERRORS?

Be accurate and remember:

"A lie gets halfway around the world before the truth has a chance to get its pants on"

Winston Churchill

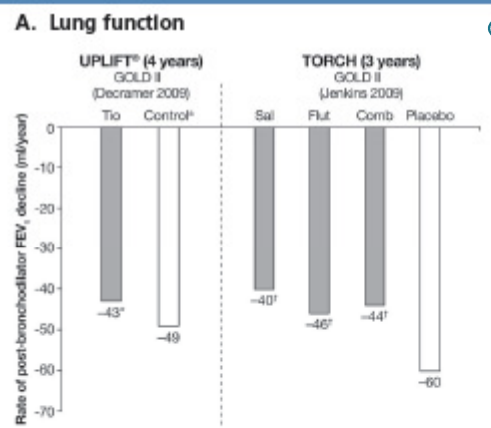
"Be careful about reading health books. You may die of a misprint"



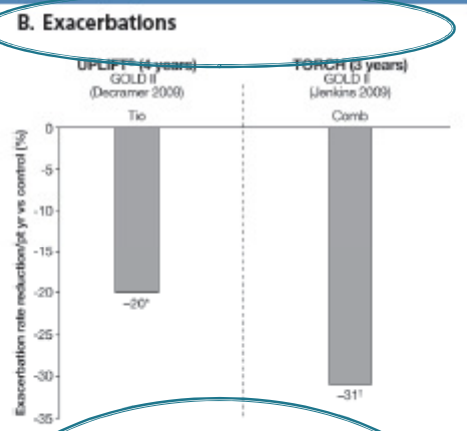
Mark Twain, author
1835 –1910

Optimising pharmacological maintenance treatment for COPD in primary care. *Primary Care Respiratory Journal (2011); 20(1): 33-45*

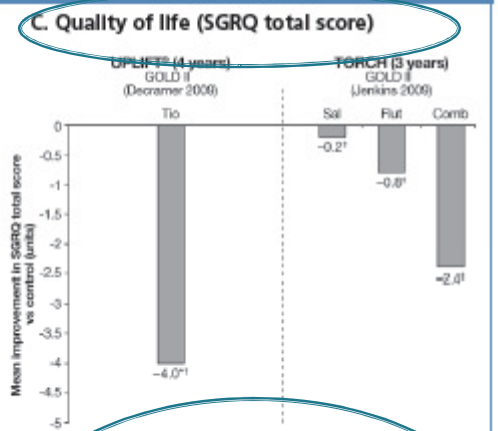
Figure 5. Lung function, exacerbations, and quality-of-life outcomes in patients with earlier disease (GOLD stage II) in UPLIFT®[15] and TORCH[16] trials.



*p<0.05 vs control. †Active treatments vs placebo not analysed statistically.
aControl group in the UPLIFT® study was permitted use of ICS or LABA (alone or in combination); patients in the TORCH study were not permitted background respiratory medication.
GOLD, Global initiative for chronic Obstructive Lung Disease; FEV_1, forced expiratory volume in 1 s; tio, tiotropium; sal, salmeterol; flut, fluticasone; comb, combination.



Mean number of exacerbations were 0.56 per year and 0.57 per year in the UPLIFT® and TORCH studies, respectively.
*p<0.0001 vs control. †Statistical significance of comparisons between active treatments and placebo not reported.
GOLD, Global initiative for chronic Obstructive Lung Disease; tio, tiotropium; comb, combination.



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The NEW ENGLAND JOURNAL of MEDICINE

ESTABLISHED IN 1812 FEBRUARY 22, 2007 VOL. 356 NO. 8

Salmeterol and Fluticasone Propionate and Survival in Chronic Obstructive Pulmonary Disease

Peter M.A. Calverley, M.D., Julie A. Anderson, M.A., Bartolome Celli, M.D., Gary T. Ferguson, M.D., Christine Jenkins, M.D., Paul W. Jones, M.D., Julie C. Yates, B.S., and Jørgen Vestbo, M.D., for the TORCH investigators*

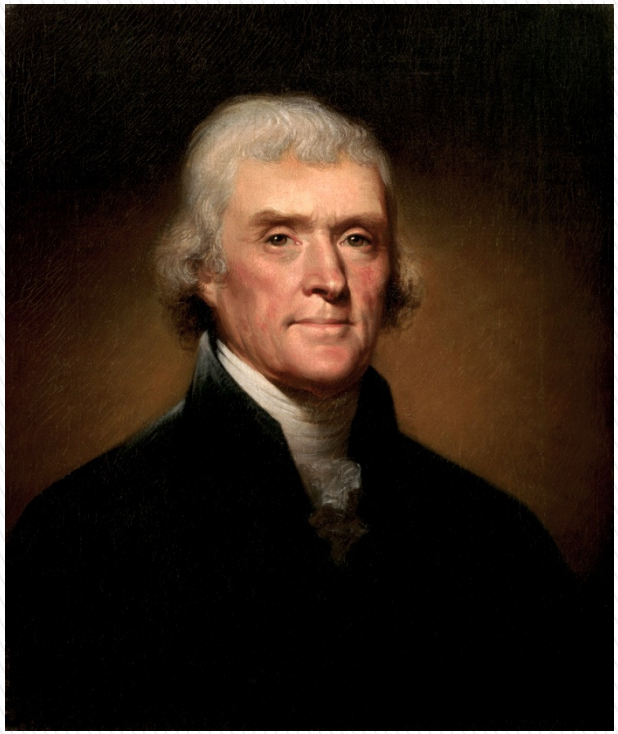
N Engl J Med 2007;356:775-89.

In another paper referenced as:

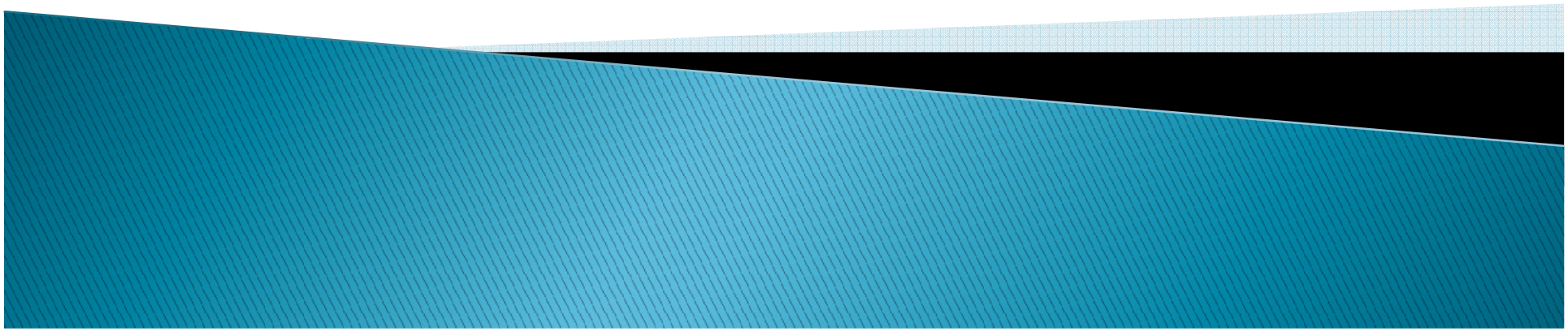
Calverley PM, Anderson JA, Celli B, Ferguson GT, Jenkins C, Jones PW, Yates JC, Vestbo J. for the TORCH investigators. Efficacy of salmeterol and fluticasone propionate on mortality in chronic obstructive pulmonary disease: the TORCH survival trial. N Engl J Med 2007;356:775–789.

"Delay is preferable to error"

Thomas Jefferson



Punctuation and grammar are important



Use punctuation correctly

A woman, without her man, is nothing

Adapted from Eats Shoots & Leaves by Lynn Truss ISBN 978-0-00-732906-9

Use punctuation correctly

A woman: without her, man is nothing

Adapted from Eats Shoots & Leaves by Lynn Truss ISBN 978-0-00-732906-9

A puzzle for you

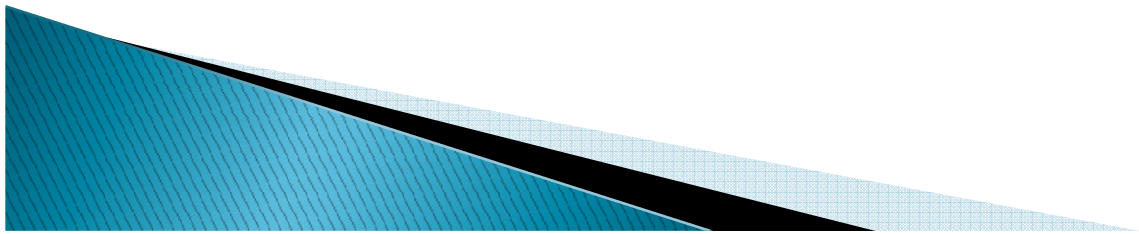
Every Lady in this land
Hath 20 Nails on *each* Hand;
Five & Twenty on Hands *and Feet*;
And this is true, without deceit.

Meaning: every lady in this land has twenty nails. On each hand five; and twenty on hands and feet.

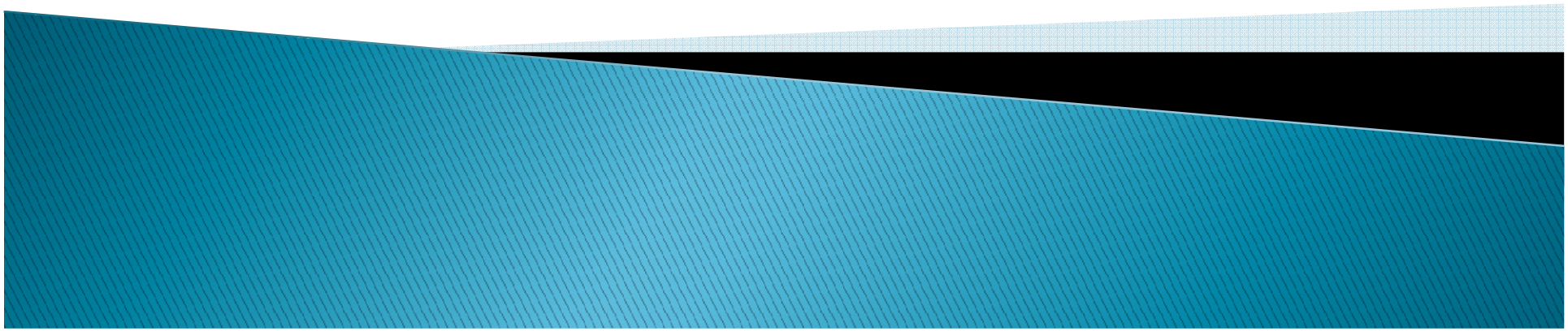
Adapted from Eats Shoots & Leaves by Lynn Truss ISBN 978-0-00-732906-9

- Grammar is also important

http://www.grammarmudge.cityslide.com/



Be organised

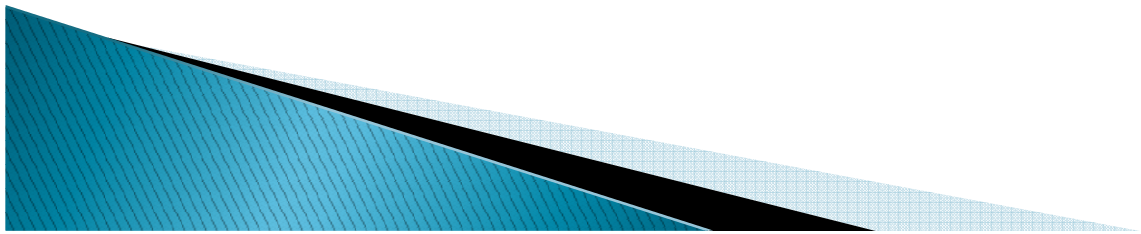


"The man who removes a mountain begins by carrying away small stones."

(William Faulkner, Nobel Literature Prize 1949)

Organise and plan your message

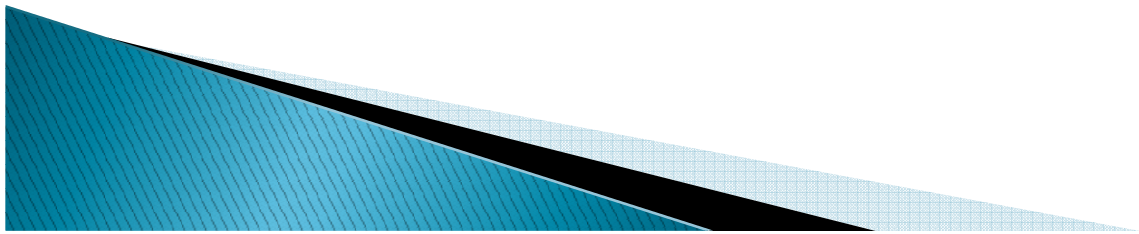
- Capture key points
- Translate into an organised list
- Develop a framework or outline
- Use complete sentences or phrases or words



Capturing ideas

- Mind mapping
- Brainstorming
- Concept maps
- Random list

Lists are rearranged, edited and structured



Develop a framework or outline

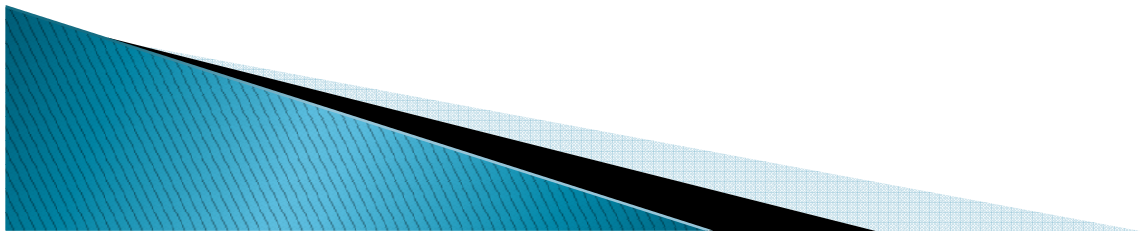
- Use headings and sub headings
  - Often use IMRaD structure
- Group related themes together

Importance of early detection

- Symptomless and/or cough/sputum
  - Important health messages
- Smoking cessation and physiological changes
- Improved prognosis
- Reduced treatment costs

Strategies to Improve early detection

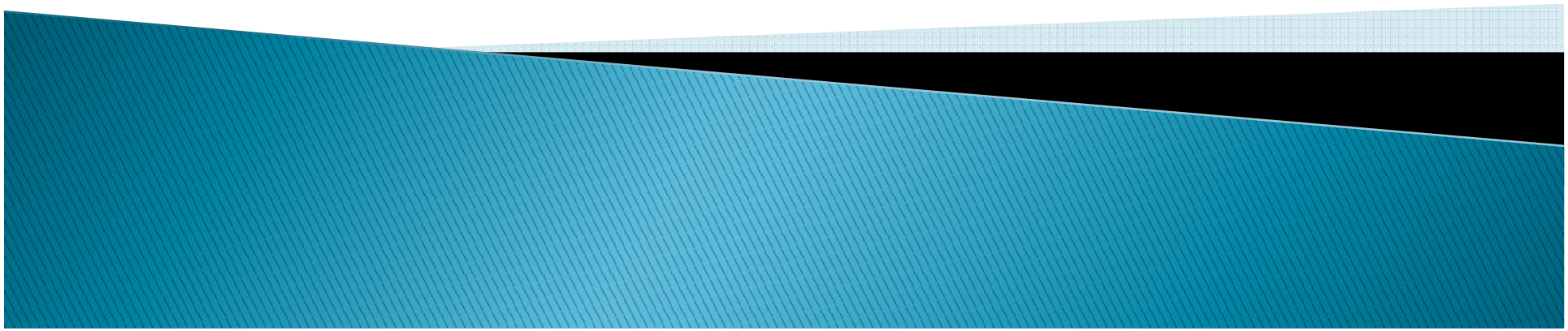
- How to identify those at risk
  - Spirometry is the most reliable detection method for COPD



“By failing to prepare, you are preparing to fail.”

Benjamin Franklin

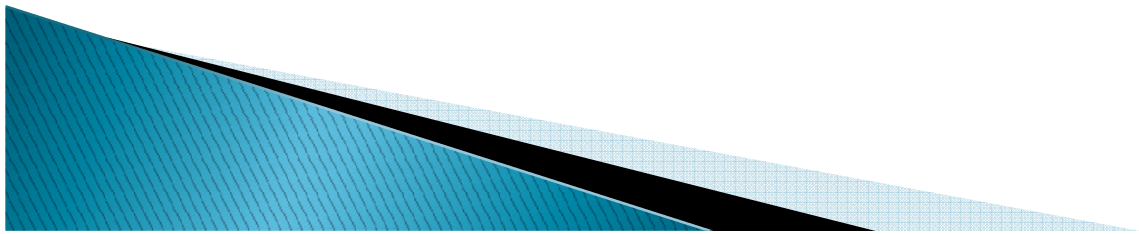
Write for your target audience



Ask yourself

1. Why am I writing this document?
2. Who am I writing it for?
3. What do I want them to understand?
4. What tone should I use?

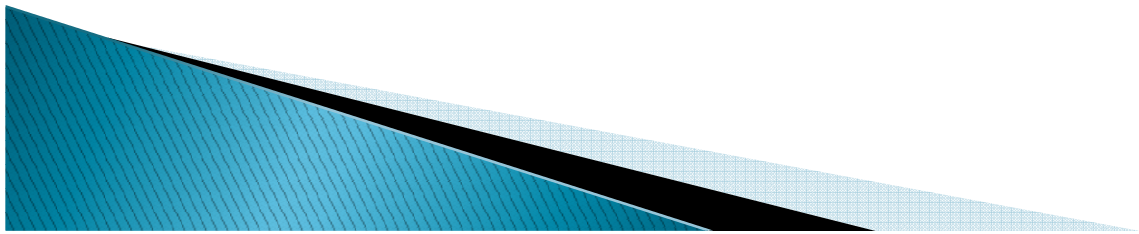
The tone you use to write a document changes depending on your intended audience



Types of audiences

- Physicians or experts in the field
- Patients
- Regulatory authorities
- General public
- Internal or external audiences?

Is your audience knowledgeable about the disease or therapy?

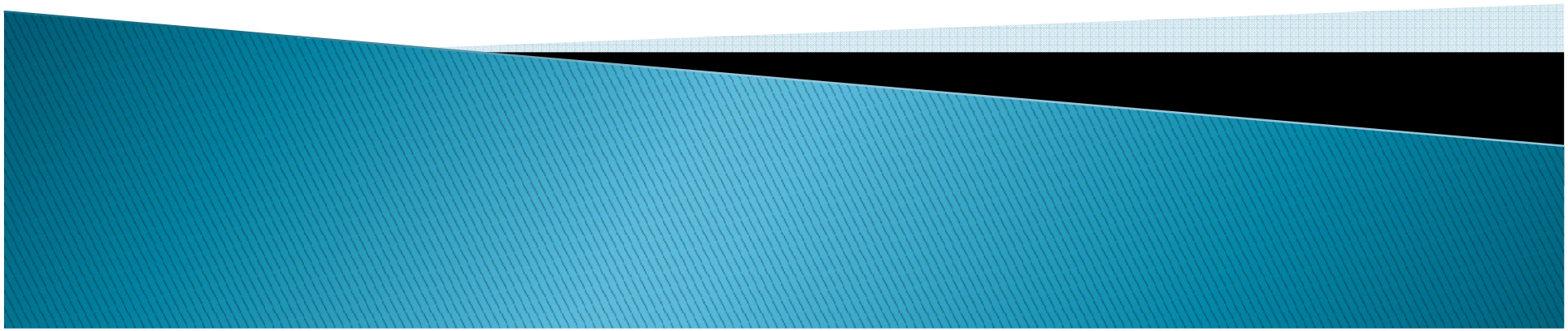


Your audience determines

- The words you use
- How much depth you need
- Which results to emphasise
- The types of illustrations you use
- How to structure the information being presented

The tone you adopt

In Summary.....



"*Put it before them briefly so they will read it, clearly so they will appreciate it.....and above all, accurately so they will be guided by its light*"

Joseph Pulitzer
(1847 –1911)