

# Writing a manuscript

Based on the Journal of the International AIDS Society Skills building workshop, PUBLISH or PERISH

# One important point

- Try to explain the whole study in a logical way, so that someone who is reading it for the first time can understand what is done.
- If you confuse the reviewers and make it difficult for them to understand the paper, they might not give you a good review

# Types of Manuscripts

- Full research report
  - 3000 words
  - 3-4 main/supporting points
  - 3-4 tables figures
- Brief report
  - 1800 words
  - 1-2 main/supporting points
  - 1-2 table/figure
- Research letter
  - 800 words
  - 1 point
  - 0-1 table/figures

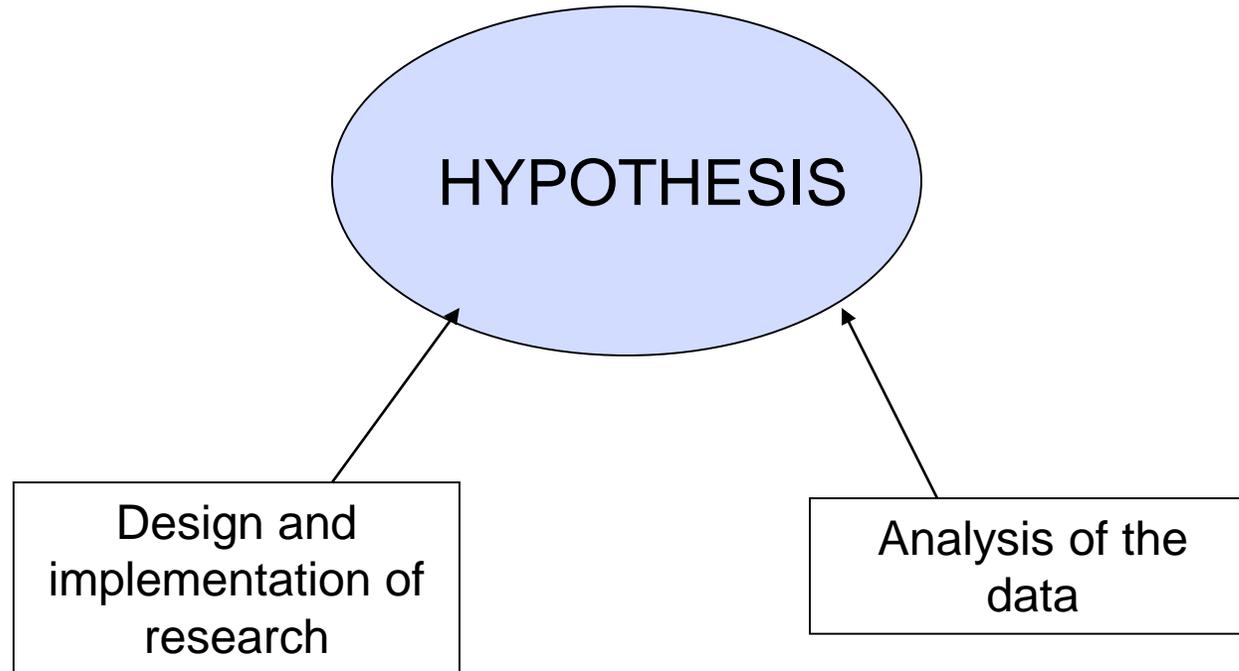
# Types of Manuscripts

- Review Article
  - Reviews the current knowledge about a topic
- Editorial
  - An opinion piece, usually invited, on another article
- Case report or case-series
  - a detailed report of the symptoms, signs, diagnosis, treatment, and follow-up of an individual patient or series of patients. Usually about something unusual or novel

# **Writing a Manuscript**

# Study Design

Everything should revolve around your



Introduction: What question was studied?

- General background
- General research question
- Previous research on the topic
- Objective of study
- Hypothesis



**Should be funnel-shaped, from general to specific**

# Introduction: 3-4 paragraphs

- Paragraph 1: Why this area of work is important
- Paragraph 2: What we know from other studies
  - Limit to only relevant references
- Paragraph 3: What we don't know
- Paragraph #4: What do we propose to do in the study reported in this paper?
  - Primary and secondary research objectives and hypotheses

# Methods/Materials: How was the question studied?

- Should be detailed enough to allow understanding of what was done, and replication
- Full details on study design
  - Clinical trial or other register information
  - Inclusion/exclusion criteria
  - Dates of data acquisition,
  - Procedures, equipment and software used
  - What data was collected?
  - Data analysis and statistical methods
  - Describe new procedures in detail
  - Human subjects approval
  - Approach to bias, confounding

## Methods/Materials (2): How was the question studied?

- May include different components, depending on the type of study
  - Use sub headings to make it easier to read
- Past tense
- **No results yet!**

# Methods structure: 3-5 paragraphs

- Paragraph 1: design, setting and participant selection, HSP information
- Paragraph 3-4: Variables and procedures for each primary and secondary objective
- Paragraph 5: Statistical methods and analysis

## METHODS

<b>Study design</b>	4	Present key elements of study design early in the paper
<b>Setting</b>	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection
<b>Participants</b>	6	(a) <i>Cohort study</i> —Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up <i>Case-control study</i> —Give the eligibility criteria, and the sources and methods of case ascertainment and control selection. Give the rationale for the choice of cases and controls <i>Cross-sectional study</i> —Give the eligibility criteria, and the sources and methods of selection of participants (b) <i>Cohort study</i> —For matched studies, give matching criteria and number of exposed and unexposed <i>Case-control study</i> —For matched studies, give matching criteria and the number of controls per case
<b>Variables</b>	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable
<b>Data sources/ measurement</b>	8*	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group
<b>Bias</b>	9	Describe any efforts to address potential sources of bias
<b>Study size</b>	10	Explain how the study size was arrived at
<b>Quantitative variables</b>	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen, and why
<b>Statistical methods</b>	12	(a) Describe all statistical methods, including those used to control for confounding (b) Describe any methods used to examine subgroups and interactions (c) Explain how missing data were addressed (d) <i>Cohort study</i> —If applicable, explain how loss to follow-up was addressed <i>Case-control study</i> —If applicable, explain how matching of cases and controls was addressed <i>Cross-sectional study</i> —If applicable, describe analytical methods taking account of sampling strategy (e) Describe any sensitivity analyses

# Results: What were the findings?

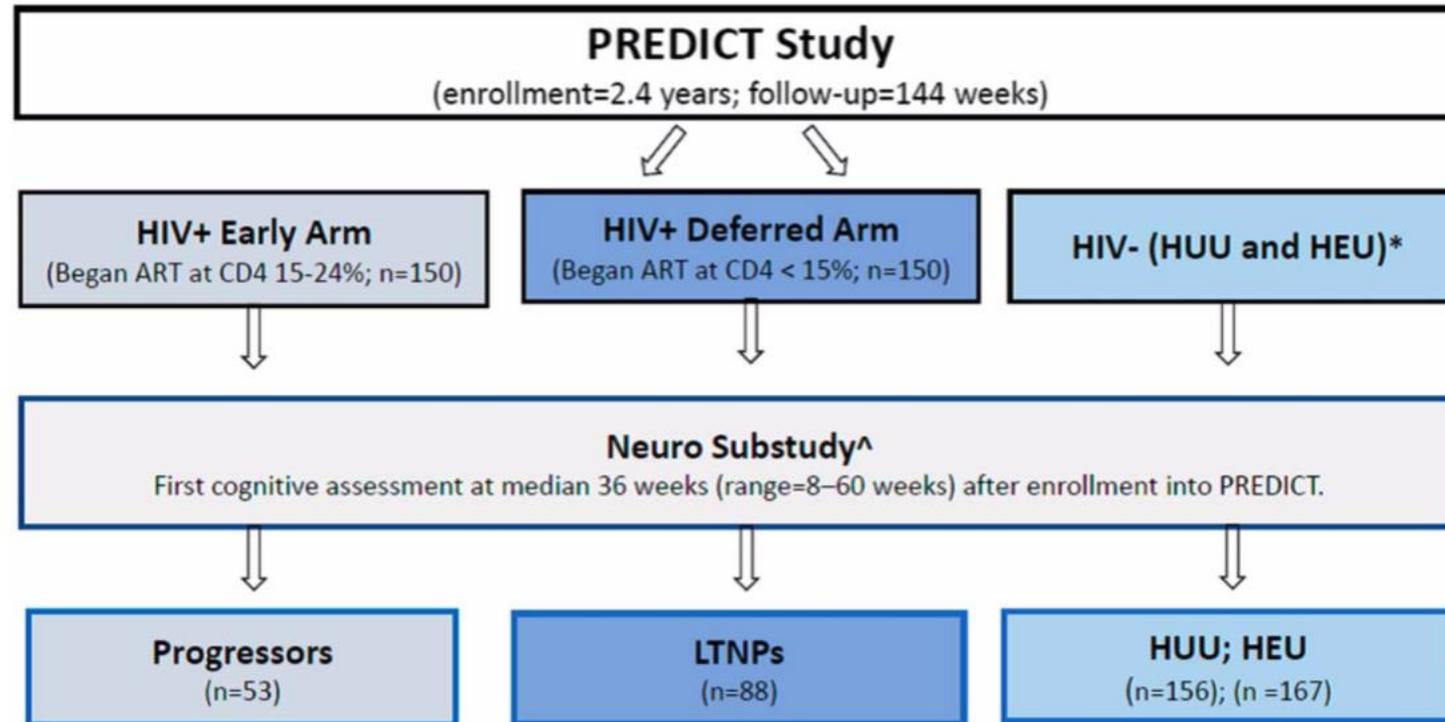
- Present data in appropriate tables and figures, and summarise them in text
- Flow of ideas should be logical, and match the order of the tables and figures
- Do not repeat data already presented
- Statistical comparisons, effect size (95%CI); P-value
- Relate results to methods (subheadings), but do not describe them again
- **Do not discuss results!**

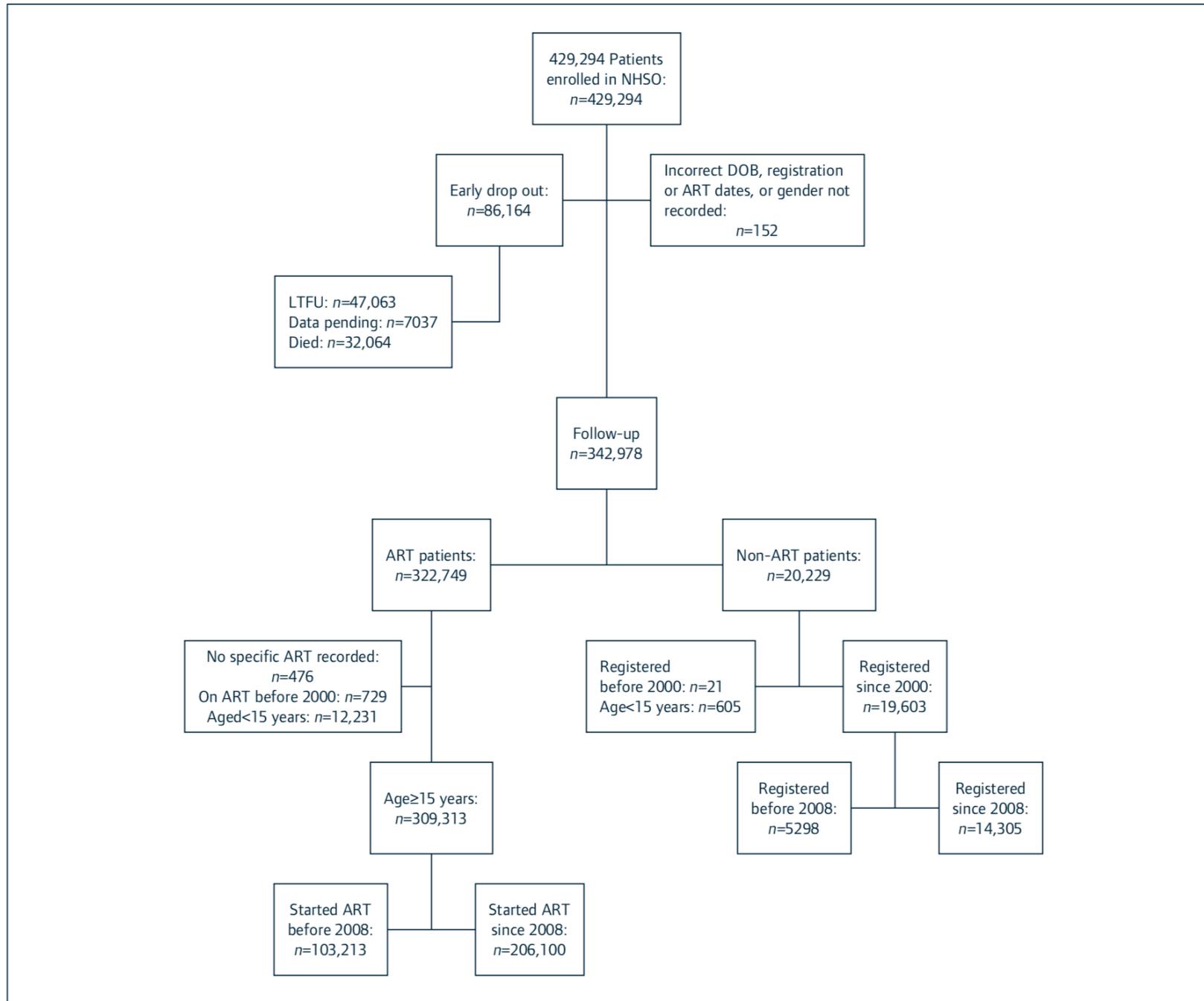
# Presenting data in results

- Give numbers and percentages -
- When percentages relate to denominators which change, write them out in full

eg 197/232 (85%) children had a viral load measurement available at baseline. Viral load was undetectable in 90% (178/197) of these children.

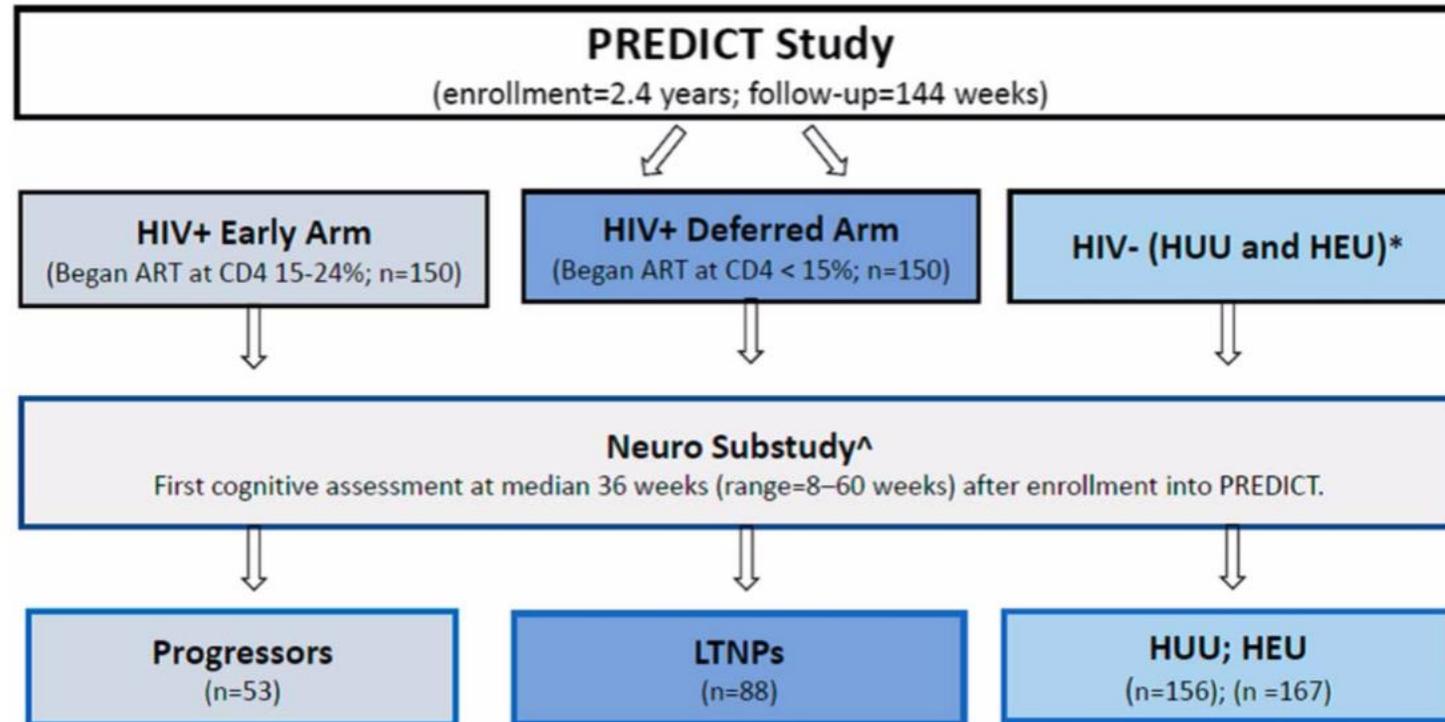
# Flow diagrams are really helpful

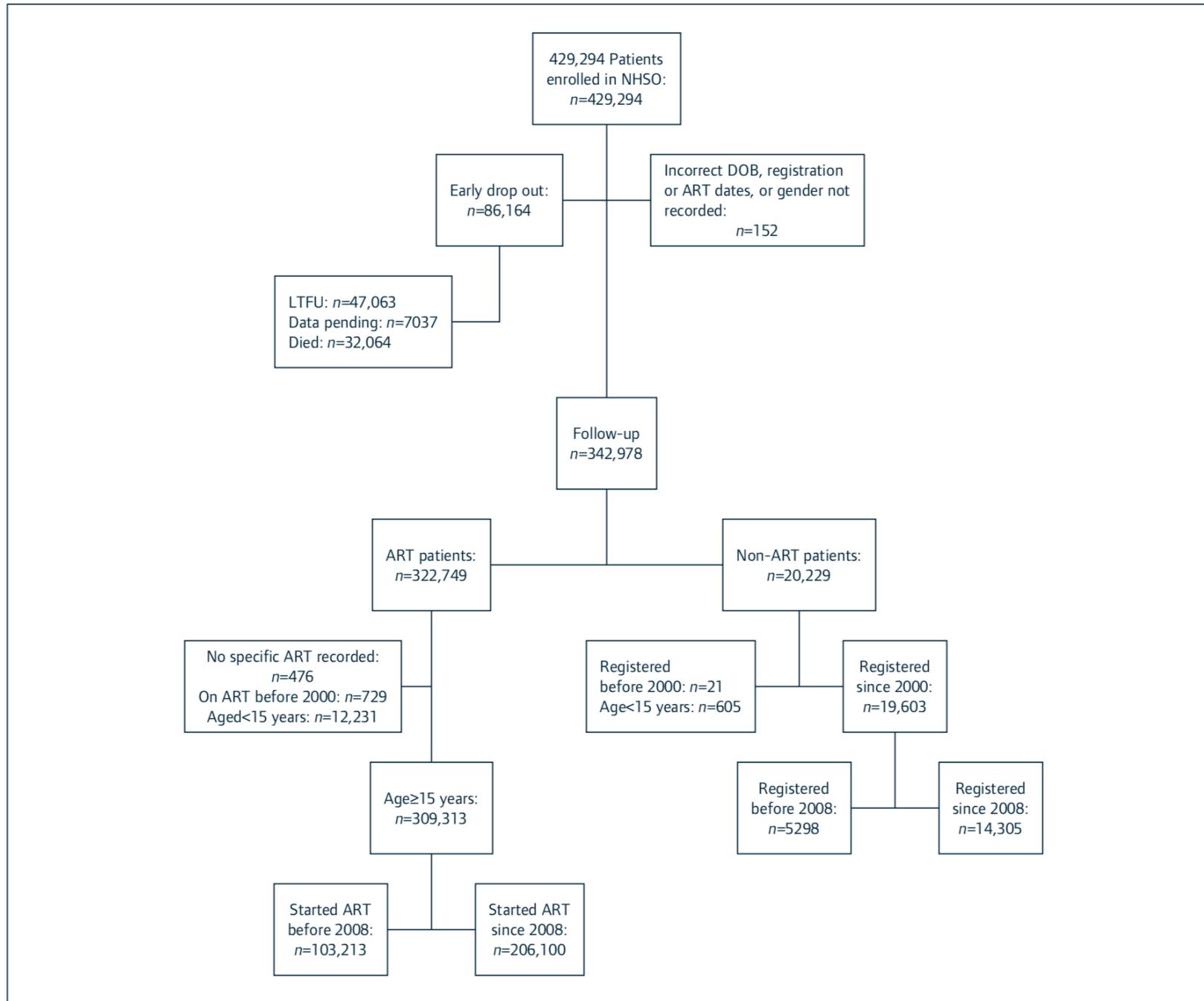




**Figure 1.** The National AIDS Program (NAP) database description and analysis population. LTFU: lost to follow-up

# Flow diagrams are really helpful





**Figure 1.** The National AIDS Program (NAP) database description and analysis population. LTFU: lost to follow-up

## RESULTS

<b>Participants</b>	13*	(a) Report the numbers of individuals at each stage of the study—e.g., numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed (b) Give reasons for non-participation at each stage (c) Consider use of a flow diagram
<b>Descriptive data</b>	14*	(a) Give characteristics of study participants (e.g., demographic, clinical, social) and information on exposures and potential confounders (b) Indicate the number of participants with missing data for each variable of interest (c) <i>Cohort study</i> —Summarise follow-up time (e.g., average and total amount)
<b>Outcome data</b>	15*	<i>Cohort study</i> —Report numbers of outcome events or summary measures over time <i>Case-control study</i> —Report numbers in each exposure category, or summary measures of exposure <i>Cross-sectional study</i> —Report numbers of outcome events or summary measures
<b>Main results</b>	16	(a) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (e.g., 95% confidence interval). Make clear which confounders were adjusted for and why they were included (b) Report category boundaries when continuous variables were categorized (c) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period
<b>Other analyses</b>	17	Report other analyses done—e.g., analyses of subgroups and interactions, and sensitivity analyses

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# Tables and Figures

- Use only when helpful to convey information
  - Title should describe what is in the table or figure
- Should be understandable on it's own
  
- Choose type based on the kind of data you have
- Include numbers of subjects (if appropriate)
- Clearly label the columns and rows
- Explain things including abbreviations with asterisks and footnotes

**TABLE 3.** Longitudinal Models Comparing Cognitive and Emotion Indices

Test and Group	Unadjusted		Adjusted*	
	Coefficient (95% CI)	<i>P</i>	Coefficient (95% CI)	<i>P</i>
VIQ				
Progressors	1.18 (−4.05 to 6.42)	0.66	2.00 (−4.28 to 8.28)	0.53
HEUs	11.53 (7.87 to 15.19)	<0.001	8.05 (3.85 to 12.25)	<0.001
HUUs	17.06 (13.49 to 20.63)	<0.001	13.75 (9.58 to 17.92)	<0.001†
PIQ				
Progressors	−3.63 (−10.13 to 2.87)	0.27	−5.83 (−13.58 to 1.92)	0.14
HEUs	9.24 (4.71 to 13.76)	<0.001	6.68 (1.51 to 11.85)	0.011†
HUUs	13.73 (9.32 to 18.15)	<0.001	10.86 (5.72 to 16.00)	<0.001†

Results comparing LTNPs to children with progressive disease (Progressors), and children who were HEU and children who were HUU.

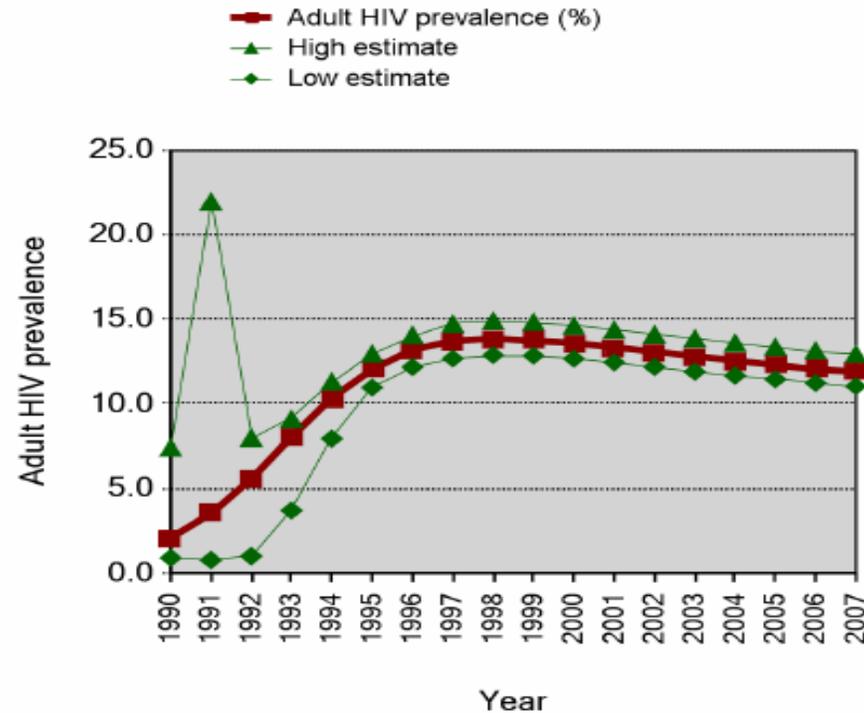
\*Adjusted for age, sex, caregiver education and income, and ethnicity.

†*P* < 0.05.

CI, confidence interval.

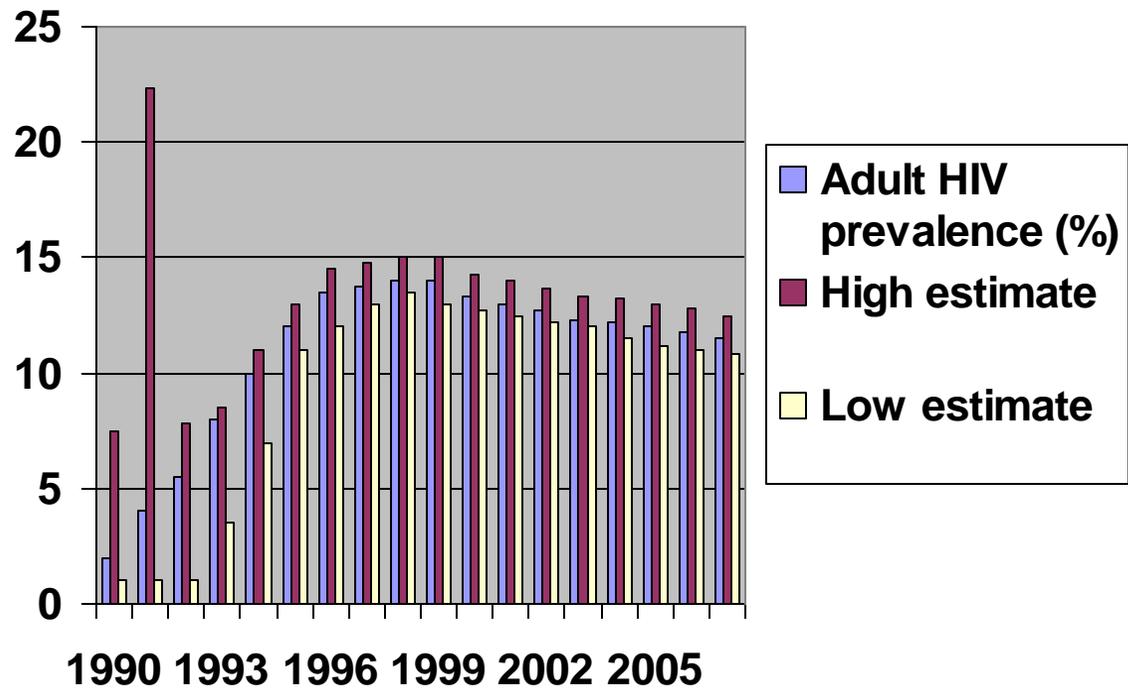
# Different figures for different messages

Estimated adult HIV (15-49) prevalence %, 1990-2007



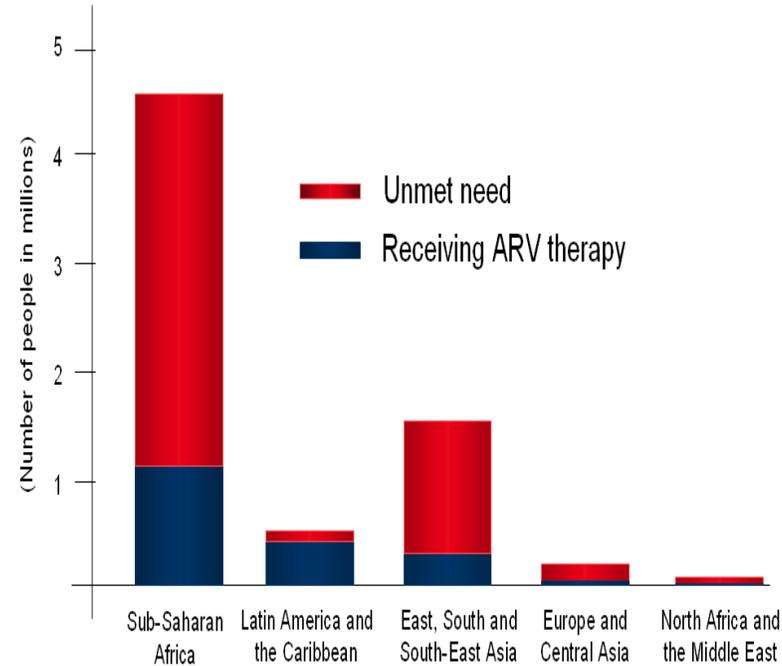
Source: UNAIDS/WHO, 2008

**Change over time**



**Change over time?**

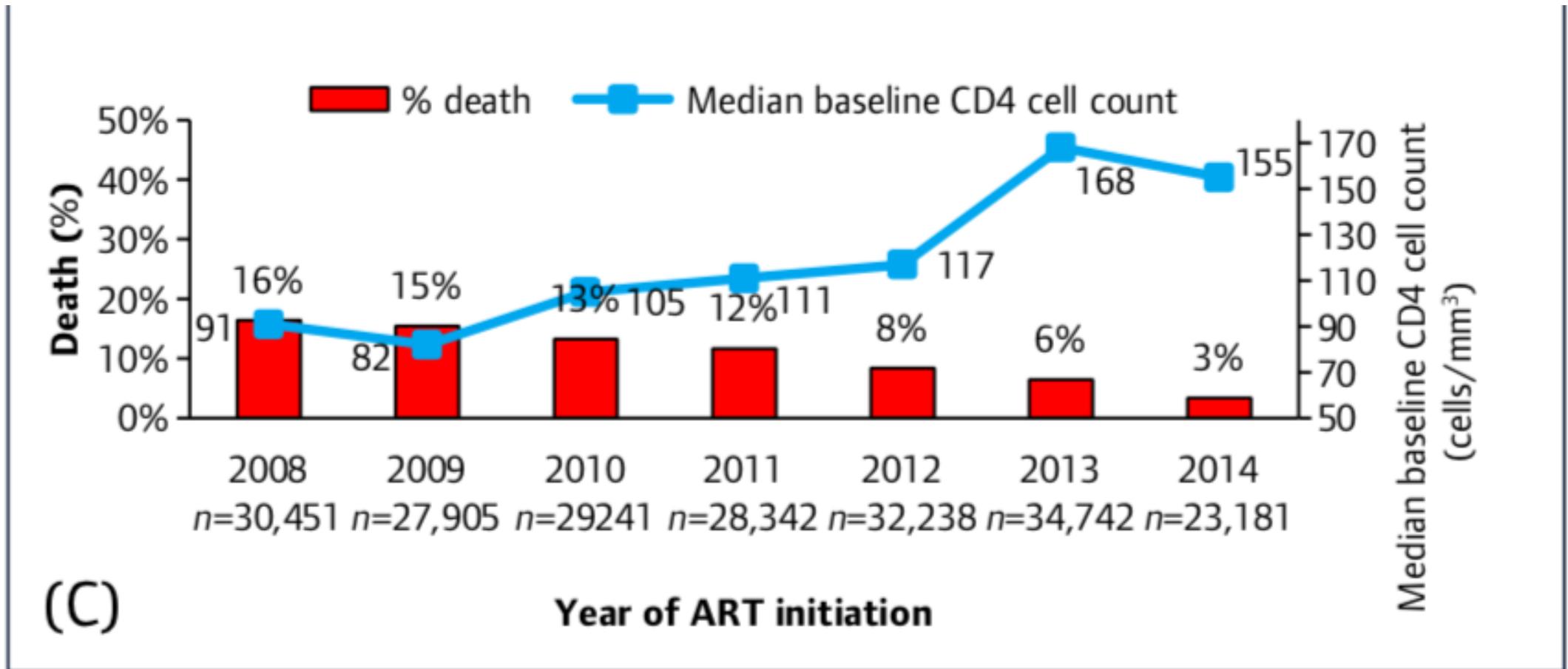
A bar graph would work for a different type of data:

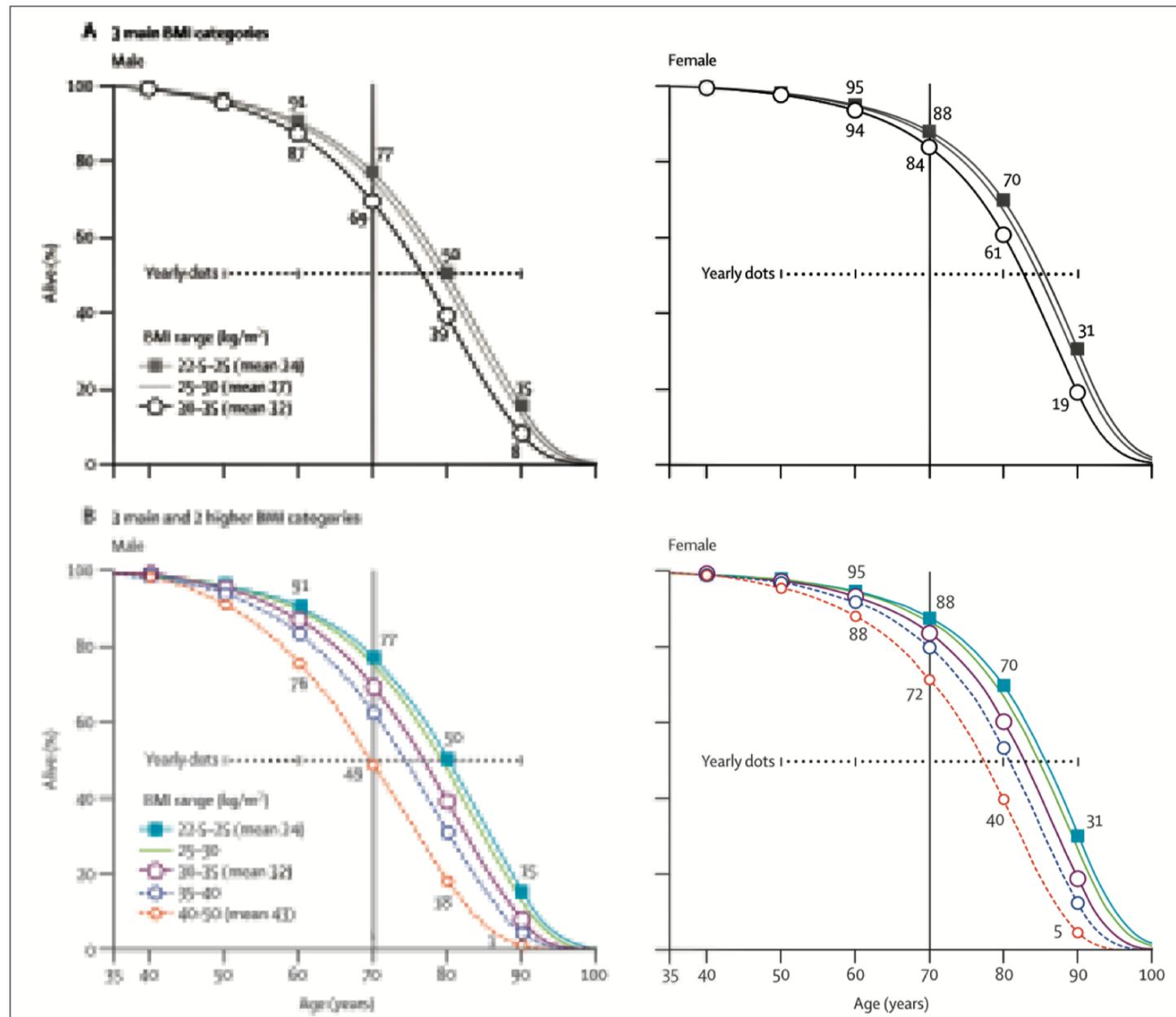


Source: UNAIDS/WHO, 2006

**Ratios**

# Overlay graphs if it helps your story





Top left: this very poor submission has very low resolution, is black and white, and text is illegible. Top right: submission at a higher resolution, but black and white rendering is not as clear as colour. Bottom left: though colour helps, the low resolution may result in inaccurate redrawing. Bottom right: colours help to differentiate data, it is very clear and can be redrawn easily. If supplied as editable vector drawing, even better.

## Discussion: What do these findings mean?

- Compare results to other work
- Answer the question of the study—did the results prove or disprove your hypothesis?
- Describe any limitations of the study
- Conclusion
- Next steps
- Do not repeat results—summarize and conclude

## **DISCUSSION**

<b>Key results</b>	18	Summarise key results with reference to study objectives
<b>Limitations</b>	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias
<b>Interpretation</b>	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence
<b>Generalisability</b>	21	Discuss the generalisability (external validity) of the study results

## **OTHER INFORMATION**

<b>Funding</b>	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based
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# Discussion - structure

- Paragraph 1 - Restate in summary form, the main results
- Paragraph 2 - 3 - Compare your results to other studies. Are the results similar? If they are different, is there any explanation?
- Paragraph 4 - Are there implications for policy, or patient care?
- Paragraph 5. Limitations and strengths of the study
- Final paragraph - brief conclusion and some suggestions for future research, or why our results are important from a public health/health perspective.

- There are several limitations of our study. It is well known that outcomes appear to improve with longer periods in care, and thus some outcomes appear better in the period 2000–2007 than in the period 2008–2014, since the follow-up in the former group is longer. The actual number of PLWH in Thailand is not known. It is therefore not possible to estimate the number of PLWH who are recruited to care following a diagnosis. Although the NAP database includes most PLWH, some who are civil servants and those who are treated in private hospitals are not included and the actual numbers are not known. Nonetheless, the detailed analyses of NAP in this study of 309,313 HIV-infected individuals with a total of 1,437,767 (PYFU) provides a meaningful snapshot of outcomes, and guidance for improving the overall national HIV universal coverage programme of Thailand.

- In conclusion, the Thai NAP has led to a continuing decline in mortality in the past decade, although gaps of late diagnosis and linkage to commencing ART remain. Rolling out of new guidelines for ART initiation regardless of CD4 cell count, novel programmes aiming to improve early diagnosis and treatment of PLWHA, and the integration of PrEP programmes among key populations will help Thailand improve the HIV continuum care cascade, and improve the chances of successfully ending AIDS by 2030.

# Abstract

- Brief summary of the manuscript—include all components
- Content must be consistent with that of paper (and what the journal requests)
- Together, the title and abstract should stand on their own
  - When the editor reads the title and abstract, it is that alone that will determine whether the manuscript goes out for review

# Title/Title Page

- Title:
  - Short and simple
  - Specific—describe the study
  - Advertisement of the manuscript
- Study authors
- Institution of each author
  
- Corresponding author details
- Abbreviations
- Short manuscript title

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**Table 1.** The STROBE Statement—Checklist of Items That Should Be Addressed in Reports of Observational Studies

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	<i>Item number</i>	<i>Recommendation</i>
<b><i>TITLE and ABSTRACT</i></b>	1	(a) Indicate the study's design with a commonly used term in the title or the abstract (b) Provide in the abstract an informative and balanced summary of what was done and what was found
<b><i>INTRODUCTION</i></b>		
<b><i>Background/ rationale</i></b>	2	Explain the scientific background and rationale for the investigation being reported
<b><i>Objectives</i></b>	3	State specific objectives, including any prespecified hypotheses

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- The ICMJE recommends that authorship be based on the following 4 criteria:
- Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work; AND
- Drafting the work or revising it critically for important intellectual content; AND
- Final approval of the version to be published; AND
- Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

# Tips

- Follow the correct structure and concentrate on organization
- Use simple and clear language—should be straightforward
- Make sure you have enough data before you make a conclusion

# Cover letter

- Format of article
- Brief summary of finding
- Statement of non-redundancy of submission of publication
- Conflict of interest
- Read and approved by all authors
- Contact info for corresponding author

# Journal of the International AIDS Society

# Journal of the International AIDS Society (JIAS)

- Online
- Peer-reviewed
- Open access (free of charge to view)
- Free of charge to publish

**Strengthening research capacity in low and middle income countries by providing:**

- Open access journal
- Workshops on scientific writing
- Manuscript Mentoring

# JIAS Objectives

Provide a forum for the publication of original, peer-reviewed articles that advance the field of HIV/AIDS in developing countries

Encourage and facilitate publication from low and middle income countries

Inform about research, analysis and opinion relevant to the delivery of HIV/AIDS prevention, treatment, and care in developing countries

Improve the dissemination medical evidence from research conducted in a diversity of geographic, cultural, socioeconomic, and clinical settings

# JIAS Publishes:

Research

Case report

Case study

Debate

Commentary

Review

Methodology

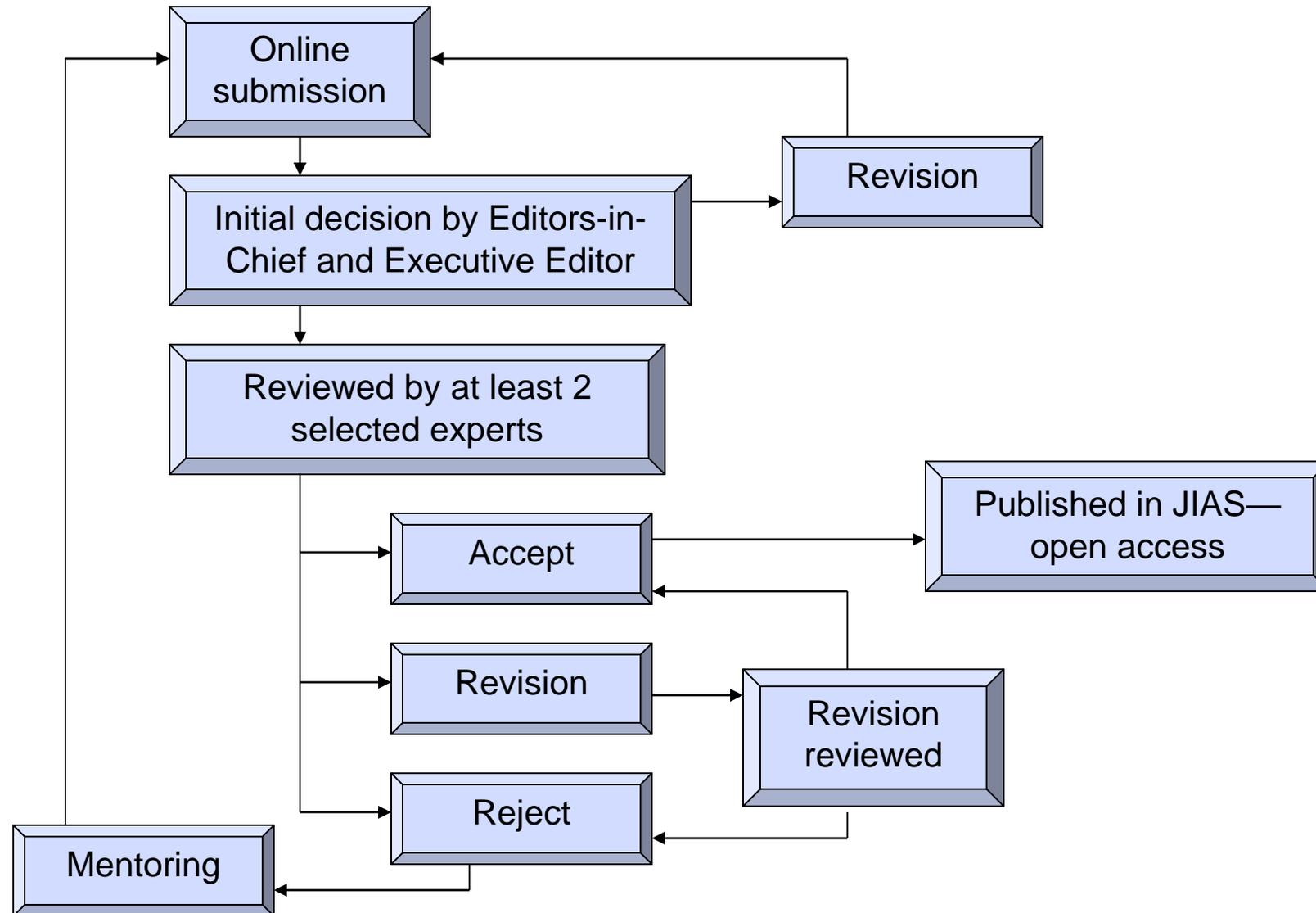
Meeting report

# JIAS Topical Areas:

- Policy; operations research; health economics
- Social sciences; humanities
- Behavioral sciences; epidemiology
- Clinical sciences
- Experimental sciences

# Submitting a Manuscript (to JIAS)

# JIAS Peer-Review Process



## Common Reasons for Failure to Publish

- \* Poorly written

- \* Incorrect format

- \* Poor structure

- \* Objective not clear

- \* Ineffective study design

- \* Not enough data

# Submitting Manuscripts to JIAS

- Online at:  
<http://www.jiasociety.org/manuscript>
- Read the Instructions for Authors page
- Follow the steps on the submission checklist

# Resources

- AuthorAid
  - Mentoring, training, workshops, discussions, documents and presentations
  - <http://www.authoraid.info>
- BioMed Central Tools for Authors
  - <http://www.biomedcentral.com/info/authors/authortools>
- BioMed Central Tips
  - <http://www.biomedcentral.com/info/ifora/report>
- Reporting guidelines
  - <http://www.equator-network.org>



## Find other researchers to work with on our collaboration space

The AuthorAID collaboration forums provide a collaborative space for researchers, practitioners and professionals all over the world to connect around research projects, ideas and funding opportunities, from small projects to multidisciplinary development challenges. **Register or sign in now and look for opportunities.**



### NEWS



#### Enrolment open: "Research Writing in the Social Sciences" online course

Sign up now for our new online course in research writing for social scientists.

By AuthorAID Team, Feb. 7, 2019 | [10 Comments](#)



#### Developing research talent capacities in Africa: Why we must cherish research

*Aurelia Munene is a Kenya-based researcher and research mentor. She is also a member and facilitator of INASP's AuthorAID project ...*

By AuthorAID Team, Feb. 1, 2019 | [1 Comment](#)



#### Photo blog - Me, my mother and a mouse in the Jungle

Nepalese biologist Sabita Gurung explains the story behind the picture which won our photo competition

### RESOURCES



#### Video: "Get Lit: The Literature Review"

Video of presentation on preparing the literature review section of a thesis or dissertation. One of the most popular videos on our online research writing courses



#### Book: Research Ethics Committees: Basic Concepts for Capacity Building

This manual includes overviews of topics such as informed consent, confidentiality, and financial conflicts of interest, as well as discussing research ethics committees and providing guidance for strengthening them.



#### Toolkit: AuthorAID Training of Trainers toolkit

Resources to run a training of trainers in research writing workshop at your institution.

#### Toolkit: Gender Mainstreaming in Higher Edu-

Screenshot

### FEATURED RESEARCHERS



#### NWAKWUO GEOFFREY CHIMA

Research interests: Global health, disaster response, risk reduction, risk management



#### Hari Prasad Nepal

Research interests: Self-directed learning, higher technical education, open educational resources, curriculum, analytics

Open to collaboration.



#### Muhammad Shakil Ahmad

Research interests: Community Empowerment; Parenting Style; Green Human Resource Management; HRM; Stress; Community Leadership; ...



#### Govinda Bhandari

Thank you!



**Any questions?**

อย่าเป็นคนที่ชอบผัดวันประกันพรุ่ง



# Tips for writing

- Start now!
  - Study other publications in new journals
- Write the first draft in Thai if you feel more comfortable to organize your thoughts in Thai
- Don't give up if you get rejected
  - Choose a journal with a lower impact factor
- If the reviewers ask you to do something - do it, unless there is a very strong scientific reason that you can back up