UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE

Making Data Meaningful

Part 1

A guide to writing stories about numbers

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NOTE

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Introduction

Making Data Meaningful Part 1: A guide to writing stories about numbers was prepared within the framework of the United Nations Economic Commission for Europe (UNECE) Work Session on Statistical Dissemination and Communication[1], under the programme of work of the Conference of European Statisticians[2].

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About this guide

The guide is intended as a practical tool to help managers, statisticians and media relations officers use text, tables, graphics and other information to bring statistics to life using effective writing techniques.

It contains suggestions, guidelines and examples – but not golden rules.

This publication recognizes that there are many practical and cultural differences among statistical offices, and that approaches vary from country to country.

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[1] Information about the UNECE Work Session on the Communication and Dissemination of Statistics is available from the UNECE website at http://www.unece.org/stats/archive/04.05.e.htm.

[2] Information about the Conference of European Statisticians is available from the UNECE website at http://www.unece.org/stats/archive/act.00.e.htm.

1. What is a statistical story?

On their own, statistics are just numbers. They are everywhere in our life. Numbers appear in sports stories, reports on the economy, stock market updates, to name only a handful. To mean anything, their value to the person in the street must be brought to life.

A statistical story is one that doesn't just recite data in words. It tells a story about the data. Readers tend to recall ideas more easily than they do data. A statistical story conveys a message that tells readers what happened, who did it, when and where it happened, and hopefully, why and how it happened. A statistical story can

- provide general awareness/perspective/context;
- inform debate on specific issues.

In journalistic terms, the number alone is not the story. A statistical story shows readers the significance, importance and relevance of the most current information. In other words, it answers the question: *Why should my audience want to read about this?*

Finally, a statistical story should contain material that is newsworthy. Ask yourself: Is the information sufficiently important and novel to attract coverage in the news media? The media may choose a different focus. But they have many other factors to consider when choosing a story line.

Statistical story-telling is about:

- catching the reader's attention with a headline or image;
- providing the story behind the numbers in an easily understood, interesting and entertaining fashion;
- encouraging journalists and others to consider how statistics might add impact to just about every story they have to tell.

2. Why tell a story?

A statistical agency should want to tell a story about its data for at least two reasons. First, the mandate of most agencies is to inform the general public about the population, society, economy and culture of the nation. This information will guide citizens in doing their jobs, raising their families, making purchases and in making many other decisions.

Secondly, an agency should want to demonstrate the relevance of its data to government and the public. In such a way, it can anticipate greater public support for its programs, as well as improved respondent relations and greater visibility of its products.

Most agencies rely mainly on two means of communicating information on the economic and social conditions of a country and its citizens: the Internet and the media.

The Internet has become an important tool for making access easier to the agency's information. More and more members of the public access an agency's data directly on its website. Still, most citizens get their statistical information from the media, and, in fact, the media remain the primary channel of communication between statistical offices and the general public.

An effective way for a statistical office to communicate through both means is to tell a statistical story that is written as clearly, concisely and simply as possible. The goal for the Internet is to better inform the public through direct access. When writing for the media, the aim is to obtain positive, accurate and informative coverage.

Statistics can tell people something about the world they live in. But not everyone is adept at understanding statistics by themselves. Consequently, statistical stories can, and must, provide a helping hand.

Last, but certainly not least, the availability of statistics in the first place depends on the willing cooperation of survey respondents. Statistical agencies cannot just rely on their legal authority to ensure a suitable response rate.

The availability of statistics also depends on the extent to which survey respondents understand that data serve an important purpose by providing a mirror on the world in which we live. The more a statistical agency can show the relevance of its data, the more respondents will be encouraged to provide the data.

3. Considerations

Statistical agencies must take into account a number of key elements in publishing statistical stories.

First, the public must feel that it can rely on its national statistical office, and the information it publishes. Statistical stories and the data they contain must be informative and initiate discussion, but never themselves be open to discussion. In other words, the information must be accurate and the agency's integrity should never come into question.

Statistical agencies should always be independent and unbiased in everything they publish. Stories must be based on high-quality data which are suitable to describe the issues they address. Changes in statistical values over time, for example, should be discussed only if they are determined by statisticians to be statistically significant.

Agencies should always guarantee the confidentiality of data on individual persons or businesses. Indeed, statistical stories may not identify, or in any way reveal, data on individuals or businesses.

In their statistical storytelling, agencies must take into account the position and feelings of certain vulnerable groups in society. Information on these groups should be made available, but the goal should always be to inform the public. Agencies should never seek publicity for themselves at the expense of these particular target groups.

The authors of this guide suggest that statistical agencies should, for the benefit of the citizens they serve, formulate a policy that explains how their practices protect the privacy and confidentiality of personal information. This policy should be given a prominent position on the agency's website.

4. How to write a statistical story

Do you have a story?

First and foremost, you need a story to tell. You should think in terms of issues or themes, rather than a description of data. Specifically, you need to find meaning in the statistics. A technical report is not a story, nor is there a story in conducting a survey.

A story tells the reader briefly what you found and why it is important to the reader. Focus on how the findings affect people. If readers are able to relate the information to important events in their life, your article becomes a lot more interesting.

Statistical offices have an obligation to make the data they collect useful to the public. Stories get people interested in statistical information and help them to understand what the information means in their lives. After they read good statistical stories, people should feel wiser and informed, not confused.

Possible topics/themes for stories:

- Current interest (policy agenda, media coverage, etc.);
- Reference to everyday life (food prices, health, etc.);
- Reference to a particular group (teens, women, the elderly, etc.);
- Personal experiences (transportation, education, etc.);
- Holidays (Independence Day, Christmas, etc.);
- Current events (statistics on a topic frequently in the news);
- Calendar themes (spring, summer, etc.);
- New findings;
- A regular series ("This is the way we live now", "Spotlight on xxxx", etc.).

Write like a journalist: The "inverted pyramid"

How can statisticians communicate like journalists? By writing their stories the way journalists do. The bonus is that the media are more likely to use the information.

Journalists use the "inverted pyramid" style. Simply, you write about your conclusions at the top of the news story, and follow with secondary points in order of decreasing importance throughout the text.

Think of a typical analytical article as a right-side-up pyramid. In the opening section, you introduce the thesis you want to prove. In following sections, you introduce the dataset, you do your analysis and you wrap things up with a set of conclusions.

Journalists invert this style. They want the main findings from those conclusions right up top in your news story. They don't want to have to dig for the story.

You build on your story line throughout the rest of the text. If the text is long, use subheadings to strengthen the organization and break it into manageable, meaningful sections. Use a verb in subheadings, such as: "Gender gap narrows slightly."

The lead: Your first paragraph

The first paragraph, or lead, is the most important element of the story. The lead not only has to grab the reader's attention and draw him or her into the story, but it also has to capture the general message of the data.

The lead is not an introduction to the story. On the contrary, it should tell a story about the data. It summarizes the story line concisely, clearly and simply.

It should contain few numbers. In fact, try writing the first sentence of the lead using no figures at all.

Don't try to summarize your whole report. Rather, provide the most important and interesting facts. And don't pack it with assumptions, explanations of methodology or information on how you collected the data.

The lead paragraph should also place your findings in context, which makes them more interesting. Research shows that it is easier to remember a news report if it establishes relevance, or attempts to explain a particular finding. Exercise caution, though. It is not a good idea to speculate, especially if your statistical office cannot empirically establish causality, or does not produce projections.

Give enough information so the reader can decide whether to continue reading. But keep it tight. Some authors suggest five lines or fewer – not five sentences – for the opening paragraph.

Poor: A new study probes the relationship between parental education and income and participation in post-secondary education from 1993 to 2001.

Good: Despite mounting financial challenges during the 1990s, young people from moderate and low-income families were no less likely to attend university in 2001 than they were in 1993, according to a new study.

Finally: there is no contradiction between getting attention and being accurate.

Remember:

- Focus on one or two findings;
- Write in everyday language (the "popular science" level);
- Create images for your readers;
- Focus on the things you want readers to remember;
- Choose the points you think are newsworthy and timely.

Good writing techniques

Write clearly and simply, using language and a style that the layperson can understand. Pretend you are explaining your findings to a friend or relative who is unfamiliar with the subject or statistics in general. Your readers may not be expert users who often go straight to the data tables.

Terms meaningful to an economist may be foreign to a layperson, so avoid jargon. Use everyday language as much as possible. If you have to use difficult terms or acronyms, you should explain them the first time they are used.

Remember: on the Internet, people want the story quickly. Write for the busy, time-sensitive reader. Avoid long, complex sentences. Keep them short and to the point. Paragraphs should contain no more than three sentences.

Paragraphs should start with a theme sentence that contains no numbers.

Example:	Norway's population had a higher growth last year than the year before. The increase amounted to 33,000 people, or a growth rate of 0.7%.

Large numbers are difficult to grasp. Use the words millions, billions or trillions. Instead of 3,657,218, write "about 3.7 million." You can also make data simpler and more comprehensible by using rates, such as per capita or per square mile. Some suggestions follow.

Use:

- Language that people understand;
- Short sentences, short paragraphs;
- One main idea per paragraph;
- Subheadings to guide the reader's eye;
- Simple language: "Get," not "acquire." "About," not "approximately." "Same," not "identical";
- Bulleted lists for easy scanning;
- A good editor. Go beyond Spell-Check; ask a colleague to read your article;
- Active voice. "We found that…" Not: "It was found that....";
- Numbers in a consistent fashion: For example, choose 20 or twenty, and stick with your choice;
- Rounded numbers (both long decimals and big numbers);
- Embedded quotes (these are sentences that generally explain "how" or "why", and which journalists like to use verbatim in their news stories in quotes);
- URLs, or electronic links, to provide your reader with a full report containing further information.

Avoid:

- ✗ "Elevator statistics": This went up, this went down, this went up;
- ✗ Jargon and technical terms;
- ✗ Acronyms;
- ✗ All capital letters and all italics: Mixed upper and lower case is easier to read;
- ✗ "Table reading", that is, describing every cell of a complex table in your text.

Not Good: From January to August, the total square metres of utility floor space building starts rose by 20.5% from the January to August period last year.

Better: In the first eight months of 2004, the amount of utility floor space started was about 20% higher than in the same period of 2003.

Headlines: Make them compelling

If your agency's particular style calls for a headline on top of a statistical story, here are some suggestions to keep in mind.

Readers are most likely to read the headline before deciding to read the full story. Therefore, it should capture their attention. The headline should be short and make people want to read on. It should say something about the findings presented in the article, not just the theme.

Write the headline after you have written your story. Headlines are so important that most newspapers employ copy editors who craft the headlines for every story. Because the information is likely new to them, these editors can focus more readily on the most interesting aspects of the story.

In the same vein, statistical agencies might consider a similar arrangement. The individual who writes the headline could be different than the story's author.

Headlines should:

- Be informative, appealing, magnetic, interesting and newsy, and incorporate:
  - the highest since, the lowest since…;
  - something new;
  - the first time, a record, a continuing trend;
- Make you want to read the story, not scare you off;
- Summarize the most important finding;
- Be no longer than one line of type;
- Not try to tell everything;
- Contain few numbers, if any at all;
- Have a verb or implied verb.

Not Good: New report released today (the report is not the news)
Energy conservation measures widespread (too vague)
Prices up in domestic and import markets (what prices?)

Good: Gasoline prices hit 10-year low
Crime down for third year in a row
July oil prices levelled off in August

Tips for writing for the Internet

The principles of good writing also apply to writing for the Internet, but keep in mind some additional suggestions.

People scan material on the Internet. They are usually in a hurry. Grabbing their attention and making the story easy to read are very important.

You also have different space limitations on the Internet than on paper. Stories that make the reader scroll through too many pages are not effective. Avoid making the reader scroll horizontally.

Format the page so the story can be printed properly, without text being cut off by margin settings. A common solution is to include a link to a ‘print friendly version’, usually another page with navigation menus and banners removed.

Write your text so the reader can get your point without having to force themselves to concentrate. Use structural features such as bulleted lists, introductory summaries and clear titles that can stand alone.

Don’t use ALL CAPITAL LETTERS on the Internet. It looks like you’re shouting. Underline only words that are electronic links. Use boldface rather than underlining for emphasis. Avoid italic typefaces because they are much harder to read.

Make sure your story is printed on a contrasting background colour: either light lettering on a dark background or the reverse. High contrast improves readability on the Internet. Make sure items are clearly dated so readers can determine if the story is current.

Graphs

A picture is indeed worth a thousand words, or a thousand data points. Graphs (or charts) can be extremely effective in expressing key results, or illustrating a presentation.

An effective graph has a clear, visual message, with an analytical heading. If a graph tries to do too much, it becomes a puzzle that requires too much work to decipher. In the worst case, it becomes just plain misleading.

Go the extra mile for your audience so that they can easily understand your point.

Good statistical graphics:

- Show the big picture by presenting many data points;
- Are “paragraphs” of data that convey one finding or a single concept;
- Highlight the data by avoiding extra information and distractions, sometimes called “non-data ink” and “chart-junk”;
- Present logical visual patterns.

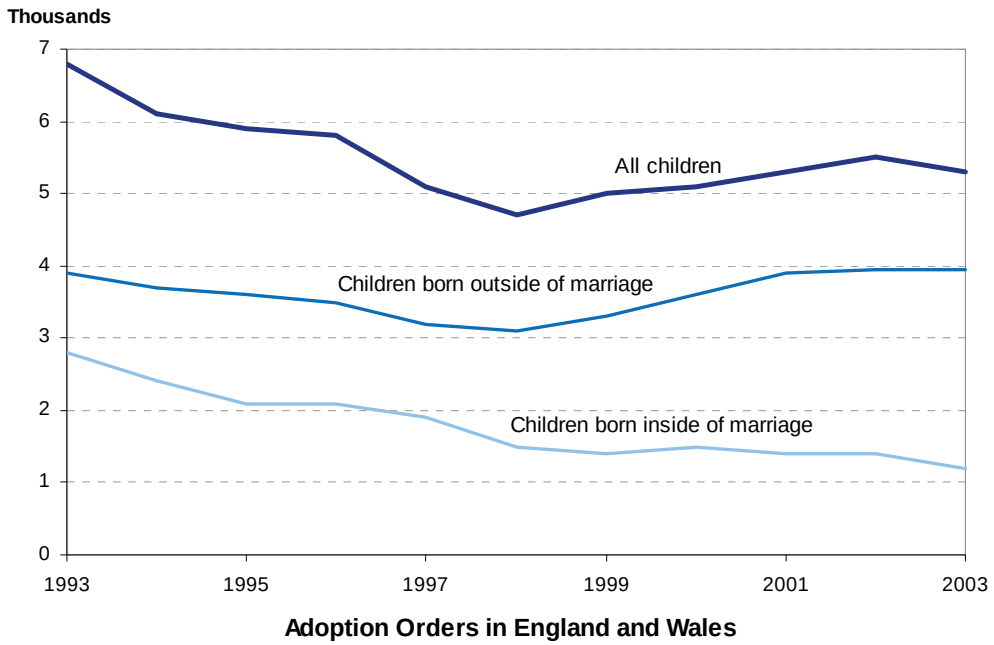
When creating graphics, let the data determine the type of graph. For example, use a line graph for data over time, or a bar graph for categorical data. To ensure you are not loading too many things into a graph, write a topic sentence for the graph.

Achieve clarity in your graphics by:

- Using solids rather than patterns for line styles and fills;
- Avoiding data point markers on line graphs;
- Using data values on a graph only if they don't interfere with the reader's ability to see the big picture;
- Starting the Y axis scale at zero;
- Using only one unit of measurement per graphic;
- Using two-dimensional designs for two-dimensional data;
- Making all text on the graph easy to understand;
    - Not using abbreviations;
    - Avoiding acronyms;
    - Writing labels from left to right;
    - Using proper grammar;
    - Avoiding legends except on maps.

For example:

Adoptions fall by 2.4% in 2003[3]



[3] Source: UK Office for National Statistics.

Tables

Good tables complement text. They should present numbers in a concise, well-organized fashion to support the analysis. Tables help minimize numbers in the statistical story. They also eliminate the need to discuss insignificant variables that are not essential to the story line.

Make it easy for readers to find and understand numbers in your table. Standard presentation tables are generally small. One decimal place will be adequate for most data. In specific cases, however, two or more decimal places may be required to illustrate subtle differences in a distribution.

Presentation tables rank data by order or other hierarchies to make the numbers easily digestible. They also show the figures that are highest and the lowest, as well as other outliers. Save large complex tables for supporting material.

Always right-justify the numbers to emphasize their architecture. The guidelines listed for graphics above, such as highlighting data by avoiding "non-data ink", also apply to the presentation of tables.

While graphics should be accompanied by an analytical heading, titles are preferred for tables. They should be short and describe the table's precise topic or message.

For example:

Race of Juvenile Offenders[4]

Race of juvenile offender(s)	Average annual percent of violent crimes committed by juvenile(s)
Total	**100.0%**
White	59.1
Black	25.2
Other	11.4
More than 1 racial group	2.6
Unknown	1.7

Maps

Maps can be used to illustrate differences or similarities across geographical areas. Local or regional patterns, which may be hidden within tables or charts, are often made clear by using a well designed map.

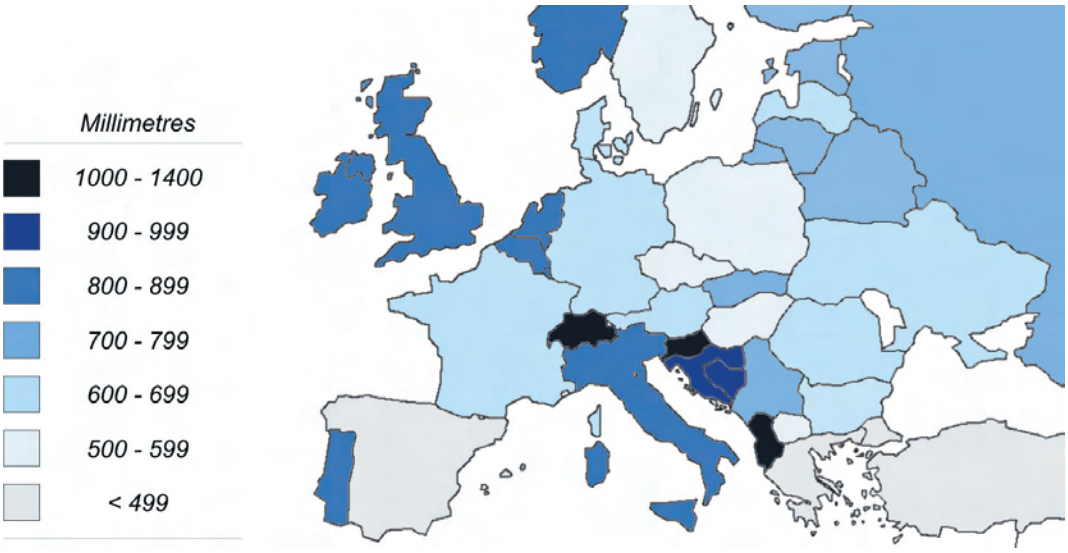
Maps are a rapidly expanding area of data presentation, with methods of geographic analysis and presentation becoming more accessible and easier to use. The cost of Geographic Information Systems (GIS), or software capable of mapping statistics, has decreased rapidly in the last ten years. Mapping that was once expensive, or required specialist hardware, is now within reach of most organizations. GIS analysis and presentation are now taught in schools and universities.

[4] Source: Baum, K. (2005), "Juvenile Victimization and Offending, 1993-2003", in *Bureau of Justice Statistics, Special Report*, U.S. Department of Justice, Office of Justice Programs, available at http://www.ojp.usdoj.gov/bjs/pub/pdf/jvo03.pdf.

Producing statistical maps can be a simple process. The most common type of statistical map is the choropleth map, where different shades of a colour are used to show contrast between regions (usually a darker colour means a larger statistical value). This type of map is best used for ratio data (e.g. population density), where the denominator is usually area (e.g. square kilometres) or population. 'Count ' data which has no denominator (e.g. total number of sheep in each region), are best illustrated using proportional or graduated symbol maps. With proportional symbol maps, the size of a symbol, such as a circle, increases in proportion to the value of the statistic. All mapping software should be capable of producing these two map types. Other types of map are possible but are best retained for specialist audiences.

When designing a map, always think about the audience and try to make it quick and easy for them to understand. If there is a natural association between a colour and a topic (e.g. blue for cold temperatures) then it would be sensible to use that colour for the legend. When choosing your legend classes, do not use complex methods unless your audience will understand them. Choosing classes of equal size, or classes containing similar numbers of events, are the most common methods. When choosing how many coloured classes to use, less is often more. Fewer classes emphasize similarity between areas and more classes emphasize the differences.

It should be possible for any statistical map to be read by a user without reference to other information and knowledge. Maps should always have a title and a legend that adequately explain the statistical units, the date that the statistical information was collected or produced and the geographic area type used. The source of statistical data should also be clearly stated. Footnotes may be used to clarify this information where needed and help to simplify titles.



Average Annual Rainfall 1961 - 1990, Europe[5]

[5] Source: United Nations Economic Commission for Europe (UNECE).

How to encourage good writing

Each statistical agency may have its own ideas on ways to reward quality writing. But here are some general suggestions.

- Set goals, such as a number of stories to be written each year;
- Reward good writers for the best headline, most contributions, etc;
- Make writing an expected part of the job rather than a sideline;
- Explore techniques for building enthusiasm for writing;
- Show staff the results of their writing: Post newspaper or magazine coverage initiated by their stories on an office bulletin board;
- Provide training.

5. Writing about data: Make the numbers "stick"

Numbers don't "talk". But they should communicate a message, effectively and clearly. How well they do this depends a lot on how well authors use numbers in their text.

In a sense, journalists and statisticians are from two cultures. They tend not to talk the same language. Journalists communicate with words; statisticians communicate with numbers.

Journalists are often uncomfortable when it comes to numbers. Many are unable even to calculate a percentage increase. So here are some suggestions for making the data "stick":

Don't peel the onion. Get to the point:

Poor: "The largest contributor to the monthly increase in the CPI was a 0.5% rise in the transportation index."

Better: "Higher auto insurance premiums and air fares helped push up consumer prices this month."

Avoid proportions in brackets:

Poor: "Working seniors were also somewhat more likely than younger people to report unpaid family work in 2004 (12% versus 4%)."

Better: "About 12% of working seniors reported unpaid family work in 2004, compared with 4% for younger people."

Watch percentage changes vs. proportions: A percentage change and a percentage point change are two different things. When you subtract numbers expressed as proportions, the result is a percentage point difference, not a percentage change.

Wrong: "The proportion of seniors who were in the labour force rose 5% from 15% in 2003 to 20% in 2004."

Right: "The proportion of seniors who were in the labour force rose five percentage points from 15% in 2003 to 20% in 2004."

Avoid changing denominators:

Confusing: "Two out of every five Canadians reported that they provided care for a senior in 2001, compared with one in seven in 1996, according to the census."

Clearer: "About 40% of Canadians reported that they provided care for a senior in 2001, up from 14% in 1996, according to the census."

Reduce big numbers to understandable levels:

Cumbersome: "Of the $246.8 billion in retail spending last year consumers spent $86.4 billion on cars and parts, and $59.3 billion on food and beverages."

Easy to grasp: "Of every $100 spent in retail stores last year, consumers spent $31 on cars and parts, compared with only $23 on food and beverages."

What's wrong with this article?

A NEW REPORT RELEASED TODAY SAYS THAT THE PRICES OF MANY PETROLEUM PRODUCTS WILL BE HIGHER IN THE FUTURE

The tight global markets and elevated crude oil prices are expected to result in higher **prices for petroleum products**. The cost of imported crude oil to refineries this winter is projected to average 98.3 c/g (about $40 per bbl) compared to 70.1 c/g last year. During the winter, WTI prices are expected to decline from their current record levels but remain in the $40 per bbl range, but despite above-average natural gas stocks, average winter natural gas prices, both at the wellhead and retail levels, are expected to be above those of last winter, particularly during the fourth quarter of 2004, in response to the hurricane-induced production losses in the Gulf of Mexico during September.

Increases in heating fuel prices are likely to generate higher expenditures even in regions where demand for fuel is expected to fall. Average residential natural gas prices this winter are expected to be 10 percent higher year-over-year and household expenditures are expected to be 15 percent higher.

Therefore, residential space-heating expenditures are projected to increase for all fuel types compared to year-ago levels.

Demand is expected to be up by 1.637 percent. This increase reflects greater heating degree days in key regions with larger concentrations of gas-heated homes and continued demand increases in the commercial and electric power sectors. Due to the availability of primary inventories, many petroleum products are expected to be reasonably well protected against the impact of demand surges under most circumstances. As of October 1, working natural gas inventories were estimated to be 3.6tcf, up 2 percent from three years ago, 3 percent from two years ago and 1 percent from last year.

Other interesting findings from this report are that the spot price for crude oil continues to fluctuate. Prices continue to remain high even thought OPEC crude oil production reached it's highest levels in September since OPEC quotas were established in 1982. Overall inventories are expected to be in the normal range, petroleum demand growth is projected to slow, and natural gas prices will be will increase.

- Headline is too long and doesn't make a clear point.
- All-cap headline looks like the author is shouting.
- Don't underline words unless they are an electronic link.
- Lead paragraph is background.
- Report title and release date aren't stated.
- Jargon: Readers might not know that gasoline and heating oil are petroleum products.
- Spell out units: c/g is cents per gallon; bbl is barrel.
- Acronyms: OPEC is the Organization of Petroleum Exporting Counties.
- First paragraph is too long: Too much detail, too many numbers.
- Sentences are too long.
- The main story line is in the third paragraph.
- Unexplained references: demand for what is expected to be up?
- Round numbers: not 1.637 percent.
- Elevator economics: this is up, this is down.
- Bullets preferable in the last paragraph.
- No URL link cited at the end.
- No contact or phone number provided.
- Proof read! In the last paragraph, "thought" should be "though"; "it's" should be its" and "will be will increase" should read "to increase".

A revised version

Released: September 16, 2004

Consumers will spend more to heat their homes this winter

Homeowners will pay much more this winter to heat their homes, according to the latest Heating Usage report released today by the Energy Minister. It predicts an 8% increase in spending over last winter.

Increases in prices for heating fuel are likely to generate higher spending, even in regions where demand for fuel is expected to fall. Average residential prices for natural gas are expected to be 10% higher than last winter, while household spending is expected to rise by 15%.

Tight global markets and elevated crude oil prices are expected to result in higher prices for petroleum products. The cost of imported crude oil to refineries this winter is projected to average 98 cents per gallon (about $40 dollars per barrel), compared with 70 cents per gallon last year.

Despite above-average stocks of natural gas, average winter natural gas prices, both at the wellhead and retail levels, are expected to be above those of last winter.

Other interesting findings from this report:

- The spot price for crude oil continues to fluctuate. Prices continue to remain high even though the Organization of Petroleum Exporting Countries (OPEC) production of crude oil reached its highest levels in September since OPEC was established in 1982.
- Overall petroleum inventories are expected to be in the normal range.

See the entire report at www.HeatingUsage.gov. Contact John Smith in the Press Office at 123.4567 for more information.

6. Evaluating the impact

Media analysis

It is a good idea for statistical agencies to monitor the impact of their statistical stories in the print and electronic media from the point of view of both the number of "hits" and the quality of coverage.

Useful resources for gauging the breadth, balance and effectiveness of media coverage include Google News, LexisNexis, blogs, and electronic and paper subscriptions.

Monitoring coverage can help managers determine if more work is needed to educate journalists, statisticians or key stakeholders about better ways of conveying the meaning of numbers in language that laypeople can understand. Monitoring would include:

- Keyword searches to measure extent of media coverage;
- Total coverage for a pre-determined period of time;
- Daily coverage to identify spikes;
- Comparing coverage to established baselines;
- Prior releases of the same data product;
- Qualitative methods to analyse media coverage;
- Correct interpretation of the numbers;
- Coverage of target audiences;
- Inclusion of key story-line messages;
- Inclusion of core corporate messages;
- Effective use of illustrative embedded graphics;
- Tone of story (positive/negative);
- Tone of quotes from external spokespersons (positive/negative).

Website analysis

Monitoring Internet traffic with website usage software can help determine types of stories most in demand. You should look for:

- The number of page views, visits, etc., to specific pages;
- Where visitors are coming from;
- Where visitors are going when they leave your pages.

In addition, surveys of users of your site – both media and general users – can help target and improve the information available. You should:

- Ask the customer if they found what they were looking for when they came to the site;
- Target specific questions to known users of the site;
- Ask how the site is used and how often;
- Assess general satisfaction with the site;
- Solicit recommendations for change or additional topics;
- Use focus groups with media representatives to explore needs, approaches and reactions.

7. Before and after: Applying good writing techniques

To illustrate how to turn a routine statistical story into one with a much stronger story-line and more effective use of data, here is a 'before' and 'after' example. Note the differences.

BEFORE

Divorces
2003

In 2003, 70,828 couples divorced, up a slight 1.0% from the recent low of 70,155 in 2002.

The number of divorces has remained relatively stable over the last few years. The year-to-year change has been below two percent for every year since 1999.

The increase in the number of divorces between 2002 and 2003 kept pace with the increase in the Canadian population over this period. As a result, the crude divorce rate for 2003 remained the same as in 2002, at 223.7 divorces for every 100,000 people in the population.

The 1.0% increase in the number of divorces across Canada is primarily due to a 5.1% increase in the number of divorces in Ontario and a 1.4% increase in Quebec between 2002 and 2003. Prince Edward Island and Saskatchewan were the only other provinces to experience an increase in the number of divorces between these years. Newfoundland and Labrador showed the largest percentage decrease by far in the number of divorces, down 21.4%.

Repeat divorces, involving people who had been divorced at least once before, are accounting for an increasing proportion of divorces.

In 1973, only 5.4% of divorces involved husbands who had previously been divorced. Thirty years later this proportion has tripled to 16.2% of all divorces.

The proportion of divorces involving wives who had previously been divorced is similar, rising from 5.4% to 15.7% over this thirty year period.

Marriage stability can be assessed using divorce rates based on years of marriage. The proportion of marriages expected to end in divorce by the 30th wedding anniversary inched up to 38.3% in 2003, from 37.6% in 2002.

The divorce rate varies greatly depending on how long couples have been married, rising rapidly in the first few years of marriage. The peak divorce rate in 2003 occurred after three years of marriage, when 26.2 out of 1,000 marriages ended in divorce. The risk of divorce decreased slowly for each additional year of marriage.

The custody of dependents, the vast majority of whom are children aged 18 and under, was granted through divorce court proceedings in 27% of 2003 divorces

In the remaining divorces, couples arrived at custody arrangements outside the divorce proceedings, or they did not have dependents. The number of dependents in these divorces is not available.

There has been a 17-year trend of steady increases in joint custody arrangements. Of the 33,000 dependents for whom custody was determined through divorce proceedings in 2003, 43.8% were awarded to the husband and wife jointly, up 2.0% from 2002. Under a joint custody arrangement, dependents do not necessarily spend equal amounts of their time with each parent.

The custody of 47.7% of dependents was awarded to the wife and 8.3% to the husband in 2003. In 2002, these percentages were 49.5% and 8.5%, respectively.

The shelf tables Divorces, 2003 (84F0213XPB, $22) are now available.

For general information or to order custom tabulations, contact Client Custom Services (613-951-1746; hd-ds@statcan.ca). To enquire about the concepts, methods or data quality of this release, contact Brent Day (613-951-4280; brent.day@statcan.ca) or Patricia Tully (613-951-1759; patricia.tully@statcan.ca), Health Statistics Division.

AFTER

Divorces – 2003

Repeat divorces, those involving people who had been divorced at least once before, are accounting for an increasing proportion of divorces in Canada, according to new data.

In 1973, only 5.4% of divorces involved husbands who had previously been divorced. Some 30 years later, this proportion has tripled to 16.2% of all divorces. Similarly, the proportion of divorces involving wives who had previously been divorced rose from 5.4% to 15.7% during this three-decade period.

The number of couples getting a divorce in 2003 edged up 1.0% from a year earlier to 70,828. This slight increase was due primarily to a 5.1% jump in divorces in Ontario, and a 1.4% increase in Quebec. Prince Edward Island and Saskatchewan were the only other provinces to experience an advance.

The number of divorces fell 21.4% in Newfoundland and Labrador, by far the largest decline. No information on the reason for this decrease is available.

Divorces

	2002	2003	2002 to 2003
	number		% change
Canada	**70,155**	**70,828**	**1.0**
Newfoundland and Labrador	842	662	-21.4
Prince Edward Island	258	281	8.9
Nova Scotia	1,990	1,907	-4.2
New Brunswick	1,461	1,450	-0.8
Quebec	16,499	16,738	1.4
Ontario	26,170	27,513	5.1
Manitoba	2,396	2,352	-1.8
Saskatchewan	1,959	1,992	1.7
Alberta	8,291	7,960	-4.0
British Columbia	10,125	9,820	-3.0
Yukon	90	87	-3.3
Northwest Territories	68	62	-8.8
Nunavut	6	4	-33.3

The number of divorces has remained relatively stable over the last few years. The year-to-year change has been below 2% since 1999. The slight rise in divorces in 2003 kept pace with the increase in the Canadian population.

Total divorce rate, by the 30th wedding anniversary

	2002	2003	2002 to 2003
	per 100 marriages		increase/decrease
Canada	**37.6**	**38.3**	**0.7**
Newfoundland and Labrador	21.8	17.1	-4.7
Prince Edward Island	25.2	27.3	2.1
Nova Scotia	30.4	28.9	-1.5
New Brunswick	27.2	27.6	0.4
Quebec	47.6	49.7	2.1
Ontario	34.9	37.0	2.1
Manitoba	30.3	30.2	-0.1
Saskatchewan	28.7	29.0	0.3
Alberta	41.9	40.0	-1.9
British Columbia	41.0	39.8	-1.2
Yukon	43.4	40.0	-3.4
Northwest Territories and Nunavut[1]	31.2	27.6	-3.6

1. Northwest Territories and Nunavut are combined to calculate the rates in this table because marriage and divorce data are not available for these territories separately for the 30-year period required for the calculation of the total divorce rate.

As a result, the crude divorce rate for 2003 remained stable at 223.7 divorces for every 100,000 people in the population.

Marriage stability can be assessed using divorce rates based on years of marriage. The proportion of marriages expected to end in divorce by the 30th wedding anniversary inched up to 38.3% in 2003, from 37.6% in 2002.

The divorce rate varies greatly depending on how long couples have been married. It rises rapidly in the first few years of marriage. The peak divorce rate in 2003 occurred after three years of marriage, when 26.2 out of 1,000 marriages ended in divorce.

The risk of divorce decreased slowly for each additional year of marriage.

The custody of dependents, the vast majority of whom are children aged 18 and under, was granted through divorce court proceedings in 27% of 2003 divorces.

Available on CANSIM: table 053-0002. **Definitions, data sources and methods: survey number** 3235.

The shelf tables Divorces, 2003 (84F0213XPB, $22) are now available. For general information or to order custom tabulations, contact Client Custom Services (613-951-1746; hd-ds@statcan.ca). To enquire about the concepts, methods or data quality of this release, contact Brent Day (613-951-4280; brent.day@statcan.ca) or Patricia Tully (613-951-1759; patricia.tully@statcan.ca), Health Statistics Division.

8. Examples of well-written statistical stories

There are many sources of well-written stories and this guide can only touch on some. You can find more examples on the Internet, in newspapers and in statistical publications. Here are a few areas to start looking:

- Statistics Norway publishes their Statistical Magazine online. It features a wide range of topics and shows examples of clear tables and graphics.
  http://www.ssb.no/english/magazine/
- The United States Bureau of Justice Statistics website links to their online publications and press releases.
  http://www.ojp.usdoj.gov/bjs/
- The United Kingdom's Office of National Statistics has a 'Virtual Bookshelf' that provides quick access to their online press releases, papers and publications, sorted by theme.
  http://www.statistics.gov.uk/onlineproducts/
- Statistics Netherlands regularly publishes short articles on the Internet as part of their 'Webmagazine' series. The articles show how to incorporate graphics to make the message clear.
  http://www.cbs.nl/en-GB/menu/publicaties/webpublicaties/webmagazine/
- Statistics Canada has a section on their website called 'The Daily'. Here you will find many examples of brief articles and press releases.
  http://www.statcan.ca/english/dai-quo/
- Look at websites of other statistical agencies. A good starting point is the UNECE's list of links to national and international agencies.
  http://www.unece.org/stats/links.htm

9. Further reading

Few, S. (2004), *Show Me the Numbers: Designing Tables and Graphs to Enlighten*, Oakland CA, Analytics Press.

Kosslyn, S.M. (1994), *Elements of Graph Design*, New York, W.H. Freeman and Company.

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Truss, L. (2003), *Eats, Shoots, and Leaves: The Zero Tolerance Approach to Punctuation*, London, Profile Books Ltd.

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Tufte, E.R. (1997), *Visual Explanations: Images and Quantities, Evidence and Narrative*, Cheshire CT, Graphics Press.

Tufte, E.R. (2001), *The Visual Display of Quantitative Information (2nd ed.)*, Cheshire CT, Graphics Press.

United Nations Economic Commission for Europe (2004), *Communicating with the Media: A guide for statistical organizations*, Geneva, United Nations.

Wallgren, A., Wallgren, B., Persson, R., Jorner, U. and Haaland, J.-A. (1996), *Graphing Statistics & Data: Creating Better Charts*, Thousand Oaks CA, SAGE Publications.

Making Data Meaningful

A guide to writing stories about numbers

On their own, statistics are just numbers. They are everywhere in our life. Numbers appear in sports stories, reports on the economy, stock market updates, to name only a handful. To mean anything, their value to the person in the street must be brought to life.

This guide is designed as a practical tool to help managers, statisticians and media relations officers bring statistics to life using effective writing techniques. It contains suggestions for using text, tables, graphics and other information to make data meaningful.