Dear Decision Editors,

Here is a brief summary of "How to Write a Capsule Summary." **Please note that there is a template on the last page of this document.**

Purpose: The cap sum serves two main and one secondary purpose

Primary purposes

1) Helps reader decide "should I read this"
2) Serves as an enlightened headline that answers the following questions about an investigation:
   - What was the question?
   - What was the answer?
   - Is there a clinically relevant message?

Secondary purpose

3) Help DE decide whether to accept a paper – there may be times when you are on the fence about whether to accept or reject a work. In those situations try writing the cap sum. Can you figure out what to say? If you can't that suggests that the paper may not have enough chops to be worthy of acceptance.

Features of a capsule summary:

1) Not redundant with abstract – The abstract, written by the authors, is a synopsis of the paper. The cap sum, written by *you*, is *your* take on the paper and your impression of its import and implications. A good cap sum is not a shorter version of the abstract.
2) Pithy, easy to read, not intimidating – A cap sum should be brief, and non-burdensome. There should be nothing about its length or content (e.g. loaded with numbers, acronyms, or obtuse language) that would dissuade a reader from taking the time to read it.
3) Light editorial hand – as the writer of a capsule summary you must necessarily tease out the essential message of a paper. This means that you must eliminate most of the caveats, conditional clauses and other statements of limitations that are an important part of the paper. You must find a balance between offering so many caveats that that cap sum becomes unreadable and eliminating so many caveats that you have overstated what can be gleaned from the paper. Your task is to find this balance.

Content of a capsule summary:

The typical cap sum will have the following elements somewhere within:

1) Study design – this needn't be a technical term (e.g. double-blind multicenter cross over trial) but should generally convey the type of endeavor involved.
2) Size of study – again, this can be precise "10,348 patients were enrolled" or more general "In this small pilot study."

3) Outcome measure – provide some indication of what was being measured. Often this will be self-evident when you discuss the findings.
4) Statement of clinical import or lack thereof – If there is a clinical tie-in then state what it is. If there isn't state that (ie, This study will not affect clinical practice but ….)

The writing process:

1) Aim for 90-100 words (+26 heading words) – Anything longer and readers may balk. With careful editing this length can almost always be achieved. 120 words is the ABSOLUTE MAXIMUM. If you are word-counting electronically, subtract 26 for the words in the 4 headers.
2) An opportunity to edit word-by-word – Since the number of words is limited, you have time to go through your first draft word-by-word and ask "is this word truly needed?"
3) Avoid restating question – this saves words and space. For example, avoid:
   What question this study addressed
   This study addressed ……
4) Avoid generalities – there is no need (particularly in sections 1 & 4) to include sentences that would be of no surprise to anyone with a modicum of medical knowledge (ie, "Aortic dissection is uncommon but is associated with high mortality." or are so general that they say nothing (ie, "Clinicians may want to consider using this treatment.")

The 4 (5?) sections of the capsule summary:

1) What is already known on this topic – If the unlikely case that there is a relevant systematic review done prior to the study, state its conclusion. More often, capture the state of knowledge prior to the study. In so doing, implicitly convey the rationale for conducting the study.
2) What question this study addressed – Try to capture the general question that the study asks. In some instances this is best done by stating the specific hypothesis being tested but in others a more abstract response may be better. This section may be done with a statement or a question.
3) What this study adds to our knowledge? - Do not restate all the results found in the Abstract. State the main point of the paper. Sometimes this will be quite specific (eg, In this 400 person randomized trial Drug X resulted in a 4% decrease in mortality compared to Drug Y), other times stating a general concept may be better (eg, This study provides additional support for the use of local anesthetic and for the removal of the stylet prior to traversing the dura in LP.)
4) How this is relevant to clinical practice - Use this section to indicate to readers to what extent you believe that the findings of the paper have clinical application. Recognize that most papers we publish do not have direct, immediate clinical impact. Should you be fortunate enough to have one of these, be sure to trumpet it loudly. More commonly, and perhaps more importantly, our function as editors is to let the readership know when something is not ready for prime time. Authors

do not always do the best job of this and this is your opportunity to give a "promising but by no means proven" message. Several examples follow.

If this is not relevant to clinical practice, say so:

a. Examples:
    i. This study will not change clinical practice but provides evidence that this is a promising approach. Further animal and human studies will be required before this therapy can be endorsed for routine use in humans.
    ii. These results provide little support for the clinical use of calcitonin to detect bacteremia. At present there is no justification for using the test outside the research environment.

If it should change clinical practice, say so:

b. Examples
    i. Best practice for placement of IJ lines involves use of ultrasound guidance. Efforts should be made to make ultrasound guidance of IJ lines the standard practice within emergency medicine.
    ii. In the doses used in this study, etomidate was superior to midazolam for pediatric procedural sedation, and appeared to be equally safe.

For policy papers, state the policy implications:

c. Example
    i. Contrary to common belief, uninsured patients and those who are insured by Medicaid may be more likely to LWBS than privately insured patients despite the fact that they have fewer alternative options for care. These findings raise potential safety concerns for these populations and highlight the need to direct greater efforts toward reductions in LWBS rates.

You can also hedge, of course:

d. Examples
    i. Though definitive proof will require a randomized trial, physicians should consider using local anesthetic and stylet removal when performing lumbar puncture in children.
    ii. Although these results may be inflated by the non-blinding of pain observers, the use of this relatively simple nerve block should be considered when managing pain from femur fracture in children.

5) Research we would like to see – This section is not mandatory and will be used in a small minority of capsule summaries. Use it only when you have a specific suggestion that would be of interest to the general emergency medicine community. Do not use this section to state that "a larger trial is needed" or "a randomized trial is needed."

Suggestions

1) Before writing yours, grab an issue of *Annals* and read a few cap sums to get in the mood!
2) Here are a few before and after examples of cap sums.
3) Consult Steve Green for mentoring, as he has survived the "schrigerization process" well.

 # 1 BEFORE EDITING

What is already known on this topic:
Current national policies seek improvement in hospitals' ability to respond to disasters. The Health Resources and Services Administration (HRSA) of the US Department of Health and Human Services recommend that hospitals be able to rapidly accommodate 500 new inpatients per million population. It is unknown if hospitals in the United States can meet these recommendations or how discretionary reductions in occupancy may affect bed availability.

What question this study addressed:
During the period 1996 to 2002, the authors examined data from 242 hospitals reporting to the New York Statewide Planning and Research Cooperative System (SPARCS). Daily hospital occupancy and peak hospital capacity were analyzed for pediatric and adult facilities. Using these data hospital bed vacancy per million age-specific population was determined. The New York World Trade Centers (WTC) attack on Sept 11, 2001 provided a natural experiment allowing subset analyses examining the potential effect of discretionary reductions in hospital occupancy.

What this study adds to our knowledge:
Average hospital occupancy rates were found to be 60% of peak for pediatric facilities and 82% of peak for adult facilities. Fewer beds were available for pediatric admissions with an average of 268 vacant pediatric beds per million children, compared to 555 vacant adult beds per million adults. Seasonal and geographic variations in bed availability were found. Busiest periods (months of January/February) revealed 193 and 328 vacant beds available for children and adults respectively, while least active periods (month of August) revealed 354 and 733 vacant beds. Modifications in admissions and discharges for hospitals in the New York City region during the WTC event led to an 11% reduction in hospital occupancy for both pediatric and adult patients.

How this is relevant to clinical practice Understanding hospital bed capacity, utilization patterns, and vacancy rates are critical to devising disaster surge plans which are both realistic and reasonable. Similar analyses on a state-by-state basis may assist federal agencies and healthcare planners in identifying and quantifying gaps and shortfalls in hospital bed surge capacity on a national level. Further study is necessary to determine

specific methods to improve bed capacity as well as quantify their influence on quality of care and disaster response.

338 Words!

 # 1 AFTER EDITING

What is already known on this topic:
It is unknown if hospitals in the United States can accommodate the 500 new inpatients per million population expected after a disaster.

What question this study addressed:
The authors determined the inpatient bed occupancy rates for children and adults in New York State from 1996 to 2002 and calculated surge capacity.

What this study adds to our knowledge:
Average hospital occupancy rates were 60% of peak for pediatric and 82% of peak for adult inpatient beds, resulting in an average of 268 vacant pediatric and 555 vacant adult beds per million population. There was considerable seasonal variation in these values.

How this is relevant to clinical practice This paper provides a model for using hospital bed capacity, utilization patterns, and vacancy rates to develop realistic disaster plans for victims requiring hospitalization.

111 Words

 # 2 BEFORE EDITING

What is already known on this topic
Night shifts can impair workers' motor functioning and mental alertness. There have been reports of increased motor vehicle collisions after night shifts, as well as impaired response times. Night shifts interfere with circadian rhythms and affect wellness and may affect patient care as a result.

What question this study addressed
This study addresses whether a brief nap on a night shift improves cognitive and psychomotor performance as measured by a driving simulation and cognitive tests compared to a usual 12 hour night shift without a nap.

What this study adds to our knowledge
Although physicians and nurses subjectively felt better after a nap, their performance on a driving simulation was not better than those who did not take a nap. However, the "nap"

group reported less fatigue and performed better on catheter insertions. Thus, naps may improve alertness towards the end of a 12 hour shift.

How this is relevant to clinical practice Physicians and nurses working 12 hour shifts or longer throughout the night may consider taking a brief nap.

151 words

 # 2 AFTER EDITING

What is already known on this topic

Night shifts can impair worker's motor functioning and mental alertness. There have been reports of increased motor vehicle collisions after night shifts.

What question this study addressed

This randomized controlled trial addresses whether a brief nap during a 12-hour night shift improves cognitive and psychomotor performance as measured by cognitive tests and driving simulation.

What this study adds to our knowledge

Physicians and nurses felt better after the nap. The nap improved performance on end-of-shift cognition tests but not on driving simulation. The nap group performed less well on memory tests performed immediately after the nap

How this is relevant to clinical practice This study provides some support for the value of a short nap during longer night shifts.

99 Words

TEMPLATE FOR CAPSULE SUMMARIES (remember to put the paper number in your file title (e.g. draft cap sum 2007-xxxx Authorlastname)

DECISION EDITOR:
PAPER NUMBER 200 -

What is already known on this topic

What question this study addressed

What this study adds to our knowledge

How this is relevant to clinical practice

[Research we would like to see]

Word Count: