

**TABLE 2. Chromatography Data Averages**

Solvent	% Traveled up the strip
Methylethylketone	99.4
Trichloroethane	48.7
Acetone:chloroform 2:1	97.3
Chloroform	98.3
Acetone	96.6
Butanol	97.6
Ethanol	66.8
Chloroform:glacial acetic acid:water 4:4:1	95.7
Butanol:ethanol:water 4:2:1	95.9

**TABLE 3. Comparison of MEK Results with Varying Humidity**

Chromatography results of MEK on days with humidity < 55%	Chromatography results of MEK on days with humidity > 55%
99.9%	99.3%
99.9%	99.5%
99.9%	99.5%
99.9%	99.2%
99.6%	99.4%
99.6%	99.5%
99.7%	99.5%
Average 99.8%	99.4%

(A total of 15 strips were run.)

consistent, the chromatography paper should be cut in exactly the same spot each time. Scissors may become contaminated and hinder the results of all of the strips cut. The use of a chromatography scanner instead would be ideal.

In the hospital setting, time is an important factor. This could restrict the use of butanol and butanol-containing solvents.

### Conclusions

Methylethylketone has proved to consistently carry the greatest percentage of radioactive sodium pertechnetate up the chromatography strip and we recommend it as the organic solvent of choice for this study. The eight other solvents tested could be used but would not reflect the closest estimation of the percentage carried up the strip. In a clinical situation, the small difference in results offered by MEK is probably insignificant. However, for a more accurate result in a questionable chromatography strip, MEK would be indicated. To help deter the effects of humidity on chromatography paper, we also recommend that a desiccant be placed in the container in which ITLC paper is stored.

The acceptable pH for a sodium pertechnetate elution ranges from 4.5–7.5. As long as an elution is in this range, no effect on chromatography will be observed.

### References

1. Levit N. Addition to article on effects of humidity on TLC. *The Monthly Scan* October 1981.

## ***A New Feature: Continuing Education Articles in the JNMT***

In an effort to provide you with accessible and inexpensive continuing education opportunities, the *Journal of Nuclear Medicine Technology*, beginning with this issue, will publish specially designated continuing education articles. The first such article offered for CEU credit begins on the next page. This article is one of a four-part series. To receive CEU (VOICE) credit, complete the worksheet at the end of each article. 0.2 CEUs will be awarded upon receipt of all four worksheets—one worksheet for each article in this series. To acquaint you with this convenient continuing education activity, the inaugural series of continuing education articles is being offered at no charge to you.

The four-part series entitled “Managing for Results” has been written by William S. Dunnington and Michael J. Hierl of E.R. Squibb & Sons, Inc. Many of you are familiar with the excellent management seminars presented by Squibb at various national meetings and at local sites several times each year. Mr. Dunnington and Mr. Hierl, two highly qualified management specialists, serve as the program directors for these seminars. They have very kindly agreed to write the first group of continuing education articles for us and we thank them for their efforts.

The first article in this four-article series outlines a framework for management thinking and action, focused on defining managerial vision. The second article will discuss some practical approaches to getting results in the imperfect world of health care. The next article will examine some techniques for better time management. The last of the series will describe a framework for managing improvement programs: putting changes into motion, building on successes, and making changes stick.

The worksheet that accompanies the first article is an important preliminary to the discussions in subsequent articles. The worksheet is intended to encourage you to think about certain management concerns and to direct your thinking in preparation for the upcoming articles. Your responses will also provide the authors with feedback about your reactions to the material presented now and about those management issues you find most troublesome. The authors will discuss material gathered from the worksheets in their last two articles. To get the most benefit from the managing for results series, we urge you to complete the form and return it to Mr. Dunnington and Mr. Hierl. They are eagerly awaiting your responses.

The Technologist Section is sponsoring a membership campaign this year. The theme of that campaign is “Grow With Us.” Continuing education is one of the tools we can use for professional growth. So take advantage of the free CEUs offered in conjunction with our introductory series of CE articles and . . . Grow With Us!

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# Management

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## Managing for Results—An Overview

Michael J. Hierl and William S. Dunnington

*E.R. Squibb & Sons, Inc., Princeton, New Jersey*

*The intent of this series of articles is to help nuclear medicine technologists improve their managerial effectiveness. The point of this introductory article is to prompt your thinking about long- and short-term goals, obstacles, and opportunities and resources. The worksheet at the end of this article asks you to write down some of your ideas about these issues.*

There are very few areas of inquiry that have been studied as extensively as the science of management. The amount of material available on the subject is simply staggering; yet, paradoxically, it is also one of the least understood and most imprecise disciplines in contemporary society.

In the “Managing for Results” series, we will share with you some of the ideas that have emerged from the Squibb Nuclear Medicine Management Workshops. Through these workshops we have been able to work closely with hundreds of nuclear medicine managers across the country. Our aim has been to help them construct a framework, from the mass of information available, for managing their departments more effectively. In this series, we will attempt to do much the same for the readers of the *Journal of Nuclear Medicine Technology*. In addition, we intend to establish a dialogue with you on the management issues facing nuclear medicine departments today.

This first article in our series will provide you with a brief overview of our approach as well as an initial worksheet we ask you to complete and return to us. The worksheet is intended to serve as a starting point for the series. All levels of nuclear medicine managers are invited to participate; the more responses we receive, the more we’ll be able to share with you in subsequent articles.

To begin with, the principle we base our approach on

is that the “science” of management is more myth than reality. Our experiences lead us to believe that management is far more an art than it is a science. As in the execution of any successful work of art, effective management is comprised of two phases: the extremely important initial vision for the work and the less spectacular but equally important sustained efforts to transform the vision into reality.

To consider management a science, in our opinion, unwisely characterizes it as an objective phenomenon. Not only does this view tend to understate the human, subjective elements so basic to managing effectively, but it has also led to the bewildering array of packaged management theories and techniques we see advertisements for each day. Ironically, these programs (which all but guarantee our managerial success on a money-back basis if we but follow their particular, all-purpose prescriptions) almost always fall far short of their promises. When they do, instead of questioning the premise of these quick-fix panaceas—many of us then quickly seek a newer, more sure-fire approach to try. We never seem to realize that searching for a miracle cure generally causes our managerial difficulties in the first place. While all of us would like to find perfect solutions, effective managers do not rely on them.

Through our work, we have been fortunate enough to meet and work with managers representing a variety of industries. One of the most interesting things we’ve learned through the Squibb Nuclear Medicine Workshops is that effective managers of nuclear medicine departments act very much like effective managers in other industries, but very much unlike the textbook description of a manager in the “management science” mold. While traditional managers expect their departments to react to them, they often end up reacting instead (usually unsuccessfully) to the havoc that ensues. Managers who choose to manage for results work a bit differently. They first spend a great deal of time defining their situation and what they would like to do, and

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finally they consult others for ideas on how to carry out their managerial vision effectively. These managers know how important it is for them to influence others but they also realize how important it is for them to be influenced. This takes a bit more time in the early stages of the process, but saves considerable time and energy later because there is far less "fire-fighting" to be done.

Briefly stated, the managing for results approach includes:

- (1) Defining your managerial vision
- (2) Devising a strategy to implement this vision that is "other-directed" and focused on results;
- (3) Concentrating on long-term individual and organizational development; and
- (4) Using time effectively.

Our next article will begin to explore these components.

Inherent to the success of this series, however, is that we be able to draw from reader responses. In the Squibb Nuclear Medicine Management Workshops we use the following worksheet to assist program participants in

defining their managerial vision. Your responses to this worksheet will be used to both illustrate the concept of a managerial vision and to demonstrate how this vision can be applied in a way that is both "others-directed" and focused on results.

Please complete and return this form to us, in care of the Society of Nuclear Medicine, 475 Park Ave. South, New York, NY 10016.

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