

SPECIAL ARTICLE

A Circulation Study: "The Bulletin" uses simple techniques to sample reader preferences and to adjust institutional shipments to changing needs.

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Good publication practice and Veterans Administration regulations both call for a periodic review of circulation. This review can take many directions, depending upon the nature of the publication.

In the case of the Bulletin of Prosthetics Research, which is distributed almost entirely as controlled free circulation aimed at a specific target readership, there is no subscription or sales charge attached to the receipt of the publication, in most cases.^a This makes a periodic survey of readership all the more important, since it is far easier for a recipient to continue to accept his mail than to write the publisher on his own initiative to ask him to remove his name from the mailing list. With this as a primary objective, the recipient was asked to indicate, by checking the appropriate box, as follows:

I use and wish to continue to receive the Bulletin of Prosthetics Research.

I do not wish to continue receiving the Bulletin; (please briefly state why).

Once we decided to go to the expense of a survey, we asked ourselves what other important data might be available from our respondents. Since we have 10 distinct departments in the Bulletin, it was determined that it might be very helpful to us to see what readers thought about each department. We asked our respondents to rate each department by indicating, by simple check-off, whether they always, frequently, occasionally, or never read or refer-to that specific department.

We also asked for suggestions on improvement of the Bulletin, and we further asked for suggestions of persons or organizations who might benefit from receipt of the Bulletin.

We did not threaten to remove a non-respondent from the

mailing list, so the response to this survey was purely an uncoerced voluntary act on the part of the readers.

We did not circularize our entire mailing list. For instance, we did not address the inquiry to libraries, schools, or Veterans Administration locations (the latter group was the target for a separate survey which is also reported on in this issue). Our mailing was directed mainly to individual professionals directly involved in or concerned with rehabilitative engineering research in either government or private research laboratories, in the United States, Canada, and 45 other countries all over the world. These are people who receive a copy of each issue, directly.

Our total mailing consisted of 863 letters, of which 577 were domestic or to Canada, and 286 were foreign. Domestic questionnaires had a stamped addressed return envelope to facilitate reply, whereas all foreign mail had only an addressed envelope on which the respondent had to affix his own postage, at his expense. We assumed that this expense factor and mail delays would affect the rate of return and therefore tabulated the two groups (foreign and domestic) separately.

Of the 577 domestic and Canadian mailings, 14 letters were returned as undeliverable, giving us a net of 563 presumed delivered. Against these, we received 324 positive responses, and 50 negative responses, for a total response, as of this writing, of 374. This constitutes a 66.4% return, which is an exceptionally high return.

Against the 286 foreign mailings, we had 6 returned as undeliverable, 131 positive returns, and 2 negative returns—and more returns continue to drift in. The 133 responses received to date represent a 47.5% rate of return, which more than met our expectations.

First, a short analysis of the 52 negative "stop sending it" responses. Thirteen gave no reason for choosing to no longer receive the Bulletin, although we had asked them to briefly state their reasons for declining. Of the remaining 39 negative responses, the reasons given are as follows:

- 20 – Retirement or ceased operation, deceased, very ill, eye trouble.
- 16 – Change in position or change in field of interest.
- 1 – Other source available.
- 1 – No time.
- 1 – Do not need.

We tabulated all our positive responses by listing the checks our respondents had made in the appropriate boxes against each of the departments in the Bulletin. In addition to the four categories we had listed (Always, Frequently, Occasionally, and Never) we had to include a fifth category (No Indication) to cover those replies where a respondent had not checked all or some of the boxes on the survey form (see Tables I and II).

For a quick, recognizable ranking of popularity of each department, we combined the percentage returns for responses in the Always and Frequently columns, and put them in rank order (see Table III).

It is interesting to note that there is very little divergence between domestic and foreign response in the rank order listing comparison. However, one might also conclude, from

^aThe Bulletin is available to an individual in three ways: the person may be engaged in a project or occupy a position which requires that he or she receive a personal copy of each issue directly; the person may have access to the publication in a library including the library associated with a medical center, university, or other research location, etc., or the person may order individual copies by mail from the Superintendent of Documents at the Government Printing Office. The Bulletin staff sends out several thousand "Availability Notices" upon publication of each new issue: these include a copy of the issue's Table of Contents and an official Supt. Doc. order form. The price of the issue is also shown: Bulletin prices vary somewhat from issue-to-issue with size, and currently run about \$8.00 per issue. About 10 back issues are normally available via Supt. Doc. at prices that start with \$4.50 for BPR 10-26, Fall 1976. Older issues may be obtained (with some scarce exceptions) from the Editorial offices. Single copies of articles required for research or studies are available from all issues starting with BPR 10-1, Spring 1964.

TABLE 1

Domestic and Canadian readership of the sections of the Bulletin. Analysis covers the 324 respondents who wished to continue to receive the Bulletin. (There were also 50 who said they did not.) A total of 577 survey forms were mailed to this category of reader (single-copy individual direct recipient) and out of that number 14 were returned "undeliverable". Responses were 66.4% of the mailing, which went out shortly after delivery of the Spring 1981 issue, BPR 10-35.

	"ALWAYS"		"FREQUENTLY"		"OCCASIONALLY"		"NEVER"		"NO INDIC."	
	No.	%	No.	%	No.	%	No.	%	No.	%
Scientific articles	143	44.1%	135	41.7%	26	8.0%	0	0 %	20	6.2%
Technical notes	97	29.9	147	45.3	54	16.7	3	1.0	23	7.1
Progress reports	97	29.9	130	40.2	71	21.9	4	1.2	22	6.8
Abstracts	71	21.9	135	41.7	80	24.7	8	2.5	30	9.2
Conference reports	59	18.2	91	28.1	123	38.0	14	4.3	37	11.4
Standardization	35	10.8	84	25.9	129	39.8	31	9.6	45	13.9
Publications of interest	99	30.6	119	36.7	63	19.4	7	2.2	36	11.1
Recent patents	64	19.8	62	19.1	121	37.4	37	11.4	40	12.3
Notes & news	81	25.0	123	38.0	78	24.1	10	3.1	32	9.8
Calendar	85	26.2	95	29.3	90	27.8	21	6.5	33	10.2

the listing, that the foreign readers are more inclined to read a greater percentage of the material in each issue.

As must be true in any survey, responses and how they are made engender further questions. For instance, when we received a form in which the Always column was checked straight down the line for all departments, we could only wonder whether that was patronizing, a sign of laziness on the part of the respondent, or an indication of true enthusiasm. We were more certain of those forms where the reader responded by checking selected boxes in all four columns. After all, the least we could expect from our caliber of readership was a conscientious, considered response.

An analysis of the number of readers who indicated that they use and wish to continue to receive the Bulletin, but then omitted checking some or all of the boxes below, is also interesting. As explained earlier, we tabulated these under the heading, on Tables I and II, of "No Indication." A glance at these tables shows that, under Domestic, the range of "No Indications" response ran from a low of 20 to a high of 45. On the foreign, the range was from 6 to 20. Using the Domestic Table as an example, we can assume that 20 readers (the lowest common factor) just didn't bother to fill in any boxes, but sent back the form to insure continued receipt of the Bulletin. However, another 25 readers selectively chose not to check a particular box, and these "missing responses" can be equated to either a "negative or never" response (out of concern for the sensitivity of the editor?) or might be attributable to unfamiliarity with the specific department that was left unchecked.

This survey was conducted immediately after the mailing of the Spring 1981 (BPR 10-35) issue. Over 17 years of publication, the Bulletin had developed, up until now, a recognizable format. However, this format was flexible, and, as we tried to anticipate the needs and interests of our readers, we added new departments, or expanded existing departments. For instance, each of the last four issues, up to BPR 10-35, have an expanded Progress Reports section which includes rehabilitative engineering reports from other

government agencies. In the Fall 1980 issue (BPR 10-34), we added two new departments; Conference Reports and Standardization. It probably should come as no surprise that both of these new departments were at or near the bottom of our rank order listing, (Table III) or that their boxes went frequently un-checked. This would seem to bear out our assumption that unfamiliarity was a contributing factor where there were "No Indications." "Abstracts", which was added as a new department in the Fall 1979 issue (BPR 10-32), rates 4th in rank order among foreign readers and 5th in rank order domestically. Perhaps, given time, the Conference and Standards departments will prove as popular.

As the tabulation indicates, every department was used by more than one-third of the respondents. Though no formal correlations were attempted, a sampling of the responses seemed to indicate that engineers and manufacturers were interested in "Patents" and "Standards" to a greater degree than doctors, for example.

To repeat, statistics require interpretation and can be deceiving. By statistical standards, Recent Patents rated very low in readership interest, but closer scrutiny disclosed that it seems to be the management or head-of-laboratory individual who shows interest in this department, whereas the doctors and clinical personnel are much less concerned with this type of information. However, we do not plan to rank our readers in importance and come up with a weighted statistical analysis.

As previously noted, we encouraged comments, suggestions and criticisms. From these, we learned that the Bulletin, particularly copies going to foreign readers, was often shared by the recipient with many of his colleagues, and widely circulated within an institution, and that it was used as a teaching tool at some universities. (That happens in the U.S.A. also.) Many readers sent in names of people in the field of rehabilitative engineering and related sciences who wished to be added to our circulation list. We were swamped with requests for back issues, because many readers took advantage of our offer to supply back issues, where avail-

TABLE 2

Foreign readership of the sections of the Bulletin. Analysis covers the 131 respondents who wished to continue to receive the Bulletin. (There were two who said they did not.) A total of 286 survey forms were mailed to readers outside of the U.S. and Canada and out of that number 6 were returned as "undeliverable". Responses were 46.8% for the foreign mailing, which went out shortly after delivery of the Spring 1981 issue, BPR 10-35.

	"ALWAYS"		"FREQUENTLY"		"OCCASIONALLY"		"NEVER"		"NO INDIC."	
	No.	%	No.	%	No.	%	No.	%	No.	%
Scientific articles	73	55.7%	46	35.1%	6	4.6	0	0	6	4.6
Technical notes	65	49.6	35	26.7	20	15.3	1	.8	10	7.6
Progress reports	66	50.4	40	30.5	15	11.5	0	0	10	7.6
Abstracts	46	35.1	50	38.1	25	19.1	1	.8	9	6.9
Conference reports	36	27.5	40	30.5	40	30.5	5	3.9	10	7.6
Standardization	26	19.8	40	30.5	36	27.5	9	6.9	20	15.3
Publications of interest	54	41.2	39	29.8	25	19.1	1	.8	12	9.1
Recent patents	32	24.4	25	19.1	45	34.4	10	7.6	19	14.5
Notes and news	45	34.4	37	28.2	32	24.4	4	3.1	13	9.9
Calendar	49	37.4	20	15.3	32	24.4	12	9.1	18	13.8

able, to readers who indicated a need to maintain a full set of Bulletins for personal or institutional reference. Some smaller number of long-time readers commented favorably on our new format (changed with the Spring 1980, BPR 10-33, issue). Some indicated their appreciation of an index issue.

In summary: to a very large extent we cleaned up and updated our controlled circulation mailing list. We also provided, through the analysis of readership preferences, a management tool that could be used to shape the direction of future Bulletins. It would be even more illuminating if some of our readers, who participated in the survey and now see the fruits of their participation, would voluntarily write the editor and give us their additional comments.

With our apology went some questions

The Spring 1981 issue (BPR 10-35) of the Bulletin of Prosthetics Research was an exceptionally large issue; it had 342 pages and each copy weighed 1 pound, 12 ounces. We had known this when we sent it to the printer. What we didn't know was that a problem with paper supplies would give us an issue nearly a quarter of an inch thicker than our calculations had predicted. This precipitated a mailing problem, because our large cushioned mailing envelopes, called Jiffy® bags, which had been able to hold up to five copies of the Bulletin in the past, now had a maximum capacity of only three copies. Of course, the bags for the complete mailing had already been labeled—a not-inconsiderable task in itself.

Happily, it was discovered that there was no real problem with the single-copy portion of the mailing: these used a smaller bag which (with a little extra effort) could be made to accept one of the oversize 10-35's. The real problem arose

with the multiple-copy mailings to VA Medical Centers; 130 of them normally receive 10 copies of each issue and 26 received 5 copies.

With four 1,000-copy skid-loads of fresh-ink-smelling Bulletins crowding our office space, something had to be done quickly. Our immediate solution was to reduce the 10-copy mailings to 6 copies (in two bags) and the 5-copy mailings to 3 (in one bag). The remaining VA medical installations on the list, normally receiving fewer than five copies each, presented no problem.

When our mailing was completed, we felt that we owed our VA Medical Center recipients an explanation for the reduced quantities. At the same time, we concluded that this presented an opportunity to review our distribution program for this group of recipients. We had been mailing the 5-copy and 10-copy amounts for a number of years, basing it on an arbitrary sliding scale which reflected specific requests by a few institutions which we thought to be representative. Actually, we had only a rough estimate of the current need at each center.

We prepared a form letter addressed to the Hospital Director wherein we explained the reason for the reduced mailing. We also included the following paragraphs on the subject of internal distribution:

"We have been routinely sending you _____ copies of each issue, with the tacit understanding that you would distribute individual copies to those areas within the Medical Center where personnel would have a specific interest in such a publication. Our recommendations would be distribution to the ACOS for R&D, the Chief of the Prosthetic and Sensory Aids Unit, and Vascular Surgery, Orthopedic Surgery, and Rehabilitation Medicine. We would suggest that if such areas as Orthotics Laboratory, Audiology Clinic, Spinal Cord Injury

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Center, Restorations Clinic, are present, copies be given to them. Other interested readers would be any other of your physicians who prescribe prosthetic devices, and any biomedical engineers at your station. We already have sent a separate copy to the attention of the Medical Librarian.

It is not our intention simply to limit distribution. If you need additional copies, we will be glad to send them. However, it would help us considerably, not only for this issue but for future issues, if you could notify us as to your actual internal distribution, telling us by title who in your center receives one or more copies, and your total needs. On that basis, we will adjust our future mailing labels. (If more than 10 are required, we will honor such requests, since it is conceivable that the more diversified medical centers have more prosthetics-related areas and personnel than the smaller centers.)"

In the same letter, we further asked for any comments or criticism that would help us improve the contents and/or presentation of Bulletin.

Of the 130 letters that were sent to centers which had previously received 10 copies, 65 responded as follows:

2 indicated they wanted no copies at all. (These turned out to be regional offices, rather than medical centers, and copies were available to them in the medical center library.)

15 were satisfied with the reduced mailing of 6 copies.

3 wanted the original delivery of 10 copies restored.

The remaining 45 asked for various distribution changes ranging from cutting down to as few as 1 copy to increases to as many as 15 copies.

Of the 26 letters that were sent to former recipients of 5 copies each, 10 responded, and similarly the range requested ran from 1 to 7 copies requested.

More interesting than the wide disparity in individual center requirement for copies of the Bulletin, is the use to which the Bulletin is put. We had suggested certain areas within a medical center where personnel would have an obvious interest in the contents of the Bulletin, and these areas show high response rates in the chart presented here. On the other hand, the Bulletin is also used in areas where we would not have suspected reader interest. Conversely, since relatively few facilities have a blind rehabilitation center or a spinal cord injury center, we would expect those services to be low on the chart. We are listing the areas of response and the frequency of utilization. Some centers may find it useful to circulate this list and at least apprise personnel in each area of the availability of the Bulletin in the medical library, if not through routing.

Area of Utilization	No. of Centers
Rehabilitative Medicine, Physiatrist	73
Prosthetic & Sensory Aid Service	60
Chief - Library Service or Medical Library	35*
ACOS - Research & Development	30
Audiology - Speech Pathology	23
Chief, Surgical Service	21
Chief Engineer, Biomed. Engineer, Biomed Technician	20
Orthopedic Surgery	18
Chief, Medical Service	15
Chief of Staff	15
Orthotics Laboratory	11
Chief, Medical Administration	10
Spinal Cord Injury Centers	10
Vascular Surgery	9
Office of Director	7
Psychiatrist or Chief Psychologist	5
Chief, Nursing Service	4
Supervisory, Corrective Therapy	3
Chief, Neurology	3
Restorations Clinic	2
Prosthetics Vendors	2
Blind Rehab. Centers — Coordinators	2

TABLE 3

Percentage response and rank order of readership of the 10 regular sections and departments of the Bulletin of Prosthetics Research. Figures are based on replies by the 324 U.S. and Canadian respondents and 131 Foreign respondents whose primary replies indicated that they were using the Bulletin and wished to continue to receive it. (The percentage response figures combine those for "Always" and "Frequently".)

Department	Domestic		Foreign	
	% Response	Rank order	% Response	Rank order
Scientific articles	85.8	1	90.8	1
Technical notes	75.2	2	76.3	3
Progress reports	70.1	3	80.9	2
Publications of interest	67.3	4	71.0	5
Abstracts	63.6	5	73.2	4
Notes and news	63.0	6	62.6	6
Calendar	55.5	7	52.7	8
Conference reports	46.3	8	58.0	7
Recent patents	38.9	9	43.5	10
Standardization	36.7	10	50.3	9

ACOS for Education	1
Ophthalmology	1
Supervisor, Occupational Therapy	1
Chief, Supply Service	1
Geriatric Research Educational—Clinical Center	1
ACOS—Ambulatory Care	1
Rheumatology	1

*Some centers also get a direct mailing to the library.

In many instances, the response did not pinpoint a particular area of utilization, but indicated that a number of copies were widely circulated.

As we have noted earlier, our survey letter invited comments which might help us improve the Bulletin. The comments received turned out to be mainly laudatory. A few examples follow:

"Very informative, useful in part or whole to many different areas of this medical center".

"Tremendous resource material to the Prosthetics activity in the field, specifically the various Chiefs of the Prosthetics and Sensory Aids Service at each Medical Center".

"Our veteran population and staff have benefited immensely from this publication. This is a teaching facility, and the Bulletin of Prosthetics Research is an excellent training vehicle".

"The Bulletin meets our needs".

And, last but not least:

"Although the contents of the publication are fascinating, the quantity sent has been commented on in the past as an example of wasteful publication".

As a note to those 50% of the centers which did not respond to our inquiry, we have made the assumption that not having heard otherwise, the 6 copies sent instead of 10 were sufficient to meet your needs. (The same is true for those who got 3 copies instead of 5). As a result of this assumption, and the net change in requirements indicated by those who did respond, we have reduced our printing needs for VAMC circulation by 600 copies.

We have also received numerous letters directly from employees within the VA medical centers, requesting that their names be continued on, or placed on, our direct mailing list to individuals. To these persons, we have responded that we think logic dictates a single bulk mailing to such a location, with sufficient copies to cover individual needs. The problem with individual mailings within a medical center is the amazing volume of effort required to constantly update the address plates as people resign, are reassigned, replaced, etc.

We hope there will be two-way communication within each center, whereby the Directors advise appropriate employees of the availability of the Bulletin, and whereby the employees who have found the Bulletin useful ask the Director that they be placed on the internal distribution list ... or advise him and the librarian that there are not sufficient copies available for circulation or access. (Extra copies of an issue—or an article—are usually available for those situations where your institution's special interest or favorite son is featured in a particular article or series.

EDITOR'S NOTE: Lest those with a background in publication management and circulation techniques leap to the attack, we want to let it be known that we do know of better ways to monitor and control publication distribution. When your journal is going into large, complex institutions such as VAMC's, you should (annually, at least) put a knowledgeable staff member into several VAMC's, large and small, for periods of time up to several days, to ferret-out the actual (as contrasted with the assumed or official) channels by which the publication's actual readers get their hands on it. The role played by the publication as an asset to the teaching, research, and continuing-educational activities of the people in the VAMC (including possibly even patients) needs to be investigated. Findings can then be analyzed for clues to publication activities: for example, do any people who would benefit from seeing your publication fail to find it, or even to know about it? Would some kind of "promotion" or advertising remedy this? Would more copies help, and how should they be injected into the stream?

Such on-site circulation research is perhaps best done by an editorial person, because such research, properly done, is a rich source of hints on ways to improve the editorial "fit" between the publication and the "universe" it seeks to serve, to employ terms that are or were standard jargon in the commercial and business side of periodical publishing.

With staff pared to the bone by attrition and the encroachment of non-publishing duties, the necessary circulation and distribution leg-work will not be done in the near future. Resources and man-hours must be hoarded for use in defending the publication's basic quality. But though simple mail samplings such as those described here lack sophistication, they do have practical value. We wanted our readers to share our findings. Your comments would be most welcome.

EDITOR