

**Department of Health and Human Services**

**OFFICE OF  
INSPECTOR GENERAL**

**ENCOURAGING PHYSICIANS TO USE  
PAPERLESS CLAIMS**



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Inspector General

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# EXECUTIVE SUMMARY

## **PURPOSE**

To help the Health Care Financing Administration (HCFA) increase acceptance of paperless claims among physicians.

## **BACKGROUND**

From 1991 to 1994 the percent of assigned claims submitted by physicians to Medicare in paperless formats rose from 40 to 73 percent, the highest rate among major payers. During the same time, the percent of physicians authorized to submit paperless claims rose from 29 to 41 percent. The HCFA's leadership drove much of this increase, but market forces fostering consolidation of physician practices in managed care settings contributed.

In this inspection we focus on physicians still submitting paper claims for Medicare reimbursement. Through a mail survey of a random sample of such physicians, we examined the extent of their interest in converting to paperless claims and the kind of concerns they have about converting.

## **FINDINGS**

*Sixty-five percent of physicians who now submit Medicare claims on paper indicate a high or moderate level of interest in using paperless claims.*

Physicians with a high or moderate level of interest, as compared with those expressing a low level or no interest in paperless claims, are significantly more likely to:

- be younger (44.9 years of age on average v. 50.9); and
- receive contacts from sales or professional relations staffs, including Medicare, offering a system for paperless claims (an average 2.83 in the past year v. 1.59).

Physicians who responded to our survey with a high or moderate level of interest, as compared with those expressing a low level or no interest, were notably more likely to:

- use a computer in the office (74 v. 43 percent); and
- be Medicare participating providers (69 v. 51 percent),

but these last two differences are not statistically significant for our sample size and design.

Physicians with a high or moderate level of interest in using paperless claims do not differ significantly from their low or no interest peers with regard to the percent of their income derived from Medicare, the average number of claims submitted to Medicare, or their specialty practice.

*Eighty-three percent of physicians who submit Medicare claims on paper cite three or more concerns about using paperless claims.*

**Technical Complexity.** Major examples noted were: customizing data systems to individual practice; obtaining compatible billing software; and developing the capacity to include special narratives on claims. Cited by 89 percent of physicians with high to moderate interest in paperless claims, and by 87 percent of those with low or no interest.

**Costs.** Includes hardware or software costs and training staff to process claims by computer. Indicated by 78 percent of physicians with high or moderate interest in paperless claims; by 82 percent of those with low or no interest.

**Information Gaps.** Centers around two matters: difficulties in checking status of paperless claims and access to documentation for the paperless claim process. Noted by 83 percent of physicians in the high or moderate interest category, and by 64 percent in the low or no interest category.

**Medicare Policies.** Reflects misunderstandings about limitations on use of paperless claims by some physicians, and about capability for making edits. Mentioned by 71 percent of physicians with high or moderate interest and by 59 percent of those with low or no interest.

**Personal Preferences.** Includes factors such as age, discomfort with the computer, satisfaction with things as they are, difficulties with carrier and vendor staffs, or preference for different computer systems. Cited by 56 percent of physicians expressing a high or moderate interest in paperless claims; by 74 percent of those expressing low or no interest.

## **RECOMMENDATIONS**

We conclude that, through extended outreach, HCFA could influence many of the physicians still filing paper claims to switch voluntarily to paperless systems. At the same time, we recognize that not all of these physicians are likely to accept paperless claims and that HCFA needs to begin developing a policy framework that goes beyond expanded outreach, as a way of preparing for the day when paperless claims become the norm.

In addition, we recognize that physicians will have increased incentive to switch to paperless claims as formats for electronic billing become increasingly standardized throughout the health care industry. A similar impact will follow from increased use of one-stop shopping, where insurers electronically route claims to other payers, and other techniques that serve to make the payment process more transparent to physicians.

*The HCFA should lead a targeted outreach effort to encourage voluntary conversion to paperless Medicare claim filing by physicians who now submit claims on paper and who have a moderate to high level of interest in making the switch.*

If the physicians who express a high or moderate level of interest in using paperless claims actually made the switch:

- the Medicare administrative cost savings would be in a range between \$22 million and \$81 million annually; and
- the volume of assigned paper claims Medicare receives from physicians would be reduced from 126 million to 45 million annually.

**As part of its extended outreach effort HCFA could:**

- ▶ Send informational brochures with a return card to request additional information.
- ▶ Establish a 1-800 number for information concerning paperless claims.
- ▶ Conduct targeted mailings to Medicare participating physicians.
- ▶ Furnish information with every new provider number or address change.

**Physicians who, through these contacts, express interest in making the switch to paperless claims can be further persuaded by such efforts as:**

- ▶ Convene target physicians (and/or their office representatives) in groups with their peers (and/or their representatives) who have already switched to paperless claims.
- ▶ Send informational materials specifically addressing concerns about technical complexity, costs, information gaps, and Medicare policies.
- ▶ Propose paperless claim submission as the normal choice with each new provider number assignment or change.

***The HCFA should begin to plan now for the policy changes that will become necessary to achieve an almost completely paperless environment for processing Medicare claims.***

The HCFA also must address how in the years ahead it will approach those physicians who continue to have little or no interest in paperless claims. Here, again, to reflect the scope of the opportunity, we note that if the physicians who express little or no interest all made the switch, then:

- the additional Medicare administrative cost savings would be in a range between \$12 million and \$45 million annually, for a combined savings range between \$34 million and \$126 million annually; and
- paper claims volume would fall to zero.

Among the options available are:

- ▶ Target a date when paperless claims submission will become a condition for Medicare participating physician status.
- ▶ Target a somewhat later date when all physicians will be mandated to submit paperless claims.
- ▶ Continue to accept paper claims directly into Medicare, but impose a filing fee to cover the incremental cost of doing so.

## AGENCY COMMENTS

We sought comments on the draft report from HCFA. The HCFA concurred with both of our recommendations. We include the full text of HCFA's comments as appendix D.

In comments on our first recommendation, that it lead a targeted outreach effort to encourage voluntary conversion to electronic billing, HCFA noted that it offers positive incentives such as faster payments and free software. It has created a national standard enrollment form, and proactively participates in groups developing industry-wide standards. It also described ongoing efforts to streamline coding and data collection.

In comments on our second recommendation, that it plan now for policy changes necessary in a paperless environment, HCFA stated that it will look to create incentives for providers to abandon paper claims whenever possible.

*We appreciate HCFA's concurrence with our recommendations and its continuing initiatives to achieve the benefits of paperless claims.*

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# INTRODUCTION

## PURPOSE

To help the Health Care Financing Administration increase acceptance of paperless claims among physicians.

## BACKGROUND

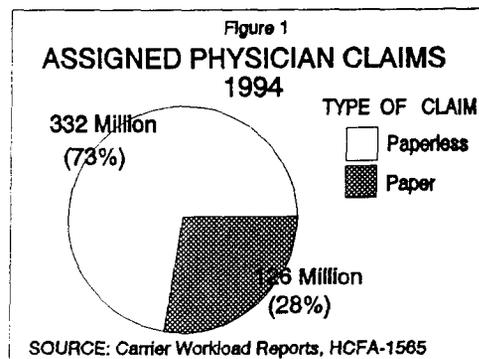
Medicare is a health insurance program for people age 65 or older and for certain disabled people.<sup>1</sup> Since it was enacted in 1965 Medicare has helped to pay for hospital (Part A) and for physician and other medical (Part B) services and supplies used by enrollees, who number about 38 million today.<sup>2</sup>

The Medicare program is run by the Health Care Financing Administration (HCFA), an operating division of the U.S. Department of Health and Human Services (HHS.) For most people Medicare pays for covered health care after the enrollee incurs an expense, in response to a bill or claim submitted by the provider to one of the insurance companies that contract to process Medicare claims. By 1997, HCFA expects, Medicare contractors will process over 700 million Part B claims annually.<sup>3</sup>

The contractors who process claims submitted to Medicare by physicians are called "carriers." Since only a minority of enrollees are in capitated plans today, most physicians must submit a separate claim for each enrollee and often for each patient encounter. Following the conventional business practice at the time Medicare was enacted, these claims were traditionally written (or typewritten) on paper and submitted through the mails.

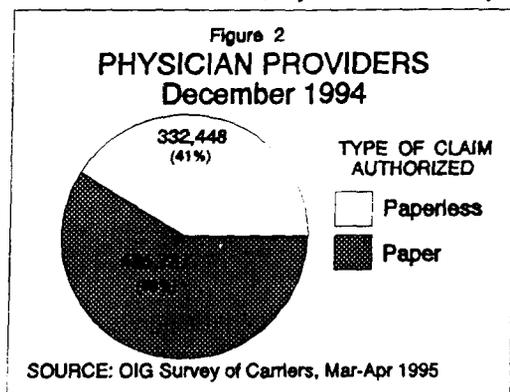
But moving, processing, and storing billions of pieces of paper is costly and slow. With the coming of standardized business computer systems and widespread efficient telecommunications, cheaper and more effective alternatives to paper claims became available.<sup>4</sup> The HCFA, recognizing Medicare's role as a leader in health care information management, very early started planning to migrate its enormous volume of paper claims into an era of electronic commerce.

Building upon its experiences at meetings of the Workgroup for Electronic Data Interchange (WEDI),<sup>5</sup> in late 1992 HCFA set goals for all contractors in the rates of provider acceptance of paperless claims.<sup>6</sup> By 1994, for example, a solid 73-percent majority of assigned *physician claims* were paperless (figure 1), up from 40 percent in 1991.<sup>7</sup>



The carriers achieved this substantial degree of usage of paperless claims in a relatively short time by focusing their efforts on larger and more technically sophisticated submitters of claims. Medicare participating physicians accounted for 85 percent of the assigned physician claims submitted on paper during 1994, and for 72 percent of all assigned claims submitted on paper during 1994 by all providers.

In December 1994, by contrast, only a minority of *physician providers* were authorized to



use paperless claims (figure 2.) One carrier presents an extreme example, reporting more than 80 percent of its physician claims paperless, with these coming from just 16 percent of the physician providers in the service area. The HCFA's efforts to encourage physician use of paperless claims have succeeded to a much greater extent on a claim basis than on a provider basis. But, on either basis, the rate of increase in physician use of paperless claims appears to have slowed or stopped in 1995, following substantial gains from 1992 through 1994.<sup>7</sup>

Paperless or electronic media claims (EMC) make the most sense as a coherent part of a unified process for electronic data interchange (EDI) between physicians (as providers of health care service) on the one hand and Medicare or other insurers (as third party payers for health care services) on the other. Typically such a process provides electronic remittance advice and electronic funds transfer (EFT). Optionally it may provide payment integration across many payers and data integration with the physician's office records management systems, for both accounting and professional information.

Two recent reports by the HHS Office of Inspector General (OIG) consider physician use of paperless claims for billing Medicare within the larger context of HCFA's efforts to promote all the features of EDI.

In the March 1994 report, *Electronic Data Interchange and Paperless Processing: Issues and Challenges*, OEI-12-93-00080, the OIG discussed at length emerging issues related to expansion of HCFA's use of various aspects of electronic data interchange. With regard to incentives and barriers for getting providers (especially small providers) to buy into a paperless processing system, the OIG noted simple resistance to change, additional costs of converting, and lack of standard data sets.

In a final report being issued simultaneously with this one, *Review of Medicare Providers and Electronic Claims Processing*, A-05-94-00039, among the issues discussed by the OIG is conversion of hard copy providers to paperless claims. The OIG found that many paper billers in that sample had a great deal of interest in converting (43 out of 95 were "interested"). Others continued to resist because of costs or objections to the technology. That study included Part A and Part B providers. It was based on field work conducted in Illinois, Indiana, and Ohio. In that study the OIG found, as we do in this report, that

physician concerns about paperless claims can reflect misunderstandings of Medicare policies and of the capabilities of paperless claims systems.

In this study we focus narrowly on paperless claims submittal as the necessary first step in migration to a fully electronic system. More specifically, we focus on the concerns of physicians who do not now use paperless claims and on their level of interest in switching. Physicians submitted 87 percent of all the paper claims carriers received in 1994. As a group, physicians are likely to share a common set of concerns about paperless claims that may differ from the concerns of nonphysician practitioners and other suppliers of medical items and services.

The time may be here when HCFA needs to reach out to physicians who do not yet submit paperless claims and encourage them to do so even more strongly than it has in the past. The HCFA intends that the Medicare Transaction System (MTS), which it is now building and expects to implement fully by 1999, will include a single, unified, paperless claims processing system.<sup>8</sup> If 59 percent of physicians continue to submit 27 percent of Medicare claims on paper, many of the efficiencies planned for MTS will be put in jeopardy.

## **METHODOLOGY**

We surveyed by mail a random sample of physicians who do not now use paperless claims for Medicare. We selected the sample in two stages, first by selecting a random sample of 8 of the 29 geographic carriers that process physicians' Medicare claims, then by selecting a random sample of about 100 physician provider numbers for each of the 8 carriers. In evaluating the survey results, we applied standard statistical formulas to account for the two-stage sampling. We give a more detailed description of sample selection and analysis in appendix A.

After eliminating duplicates, we mailed each selected physician a four-page questionnaire designed to measure the breadth and depth of their concerns about paperless claims and their level of interest in switching. At HCFA's suggestion we included questions about the respondent's use of a computer for Medicare billing. We tabulated the results in a database file, which we used to develop response counts and frequencies. We tested the data for nonresponse bias, and found none for the characteristics we analyzed. In appendix B we give the survey questions and results. Appendix C contains the nonresponse analysis.

When we contacted the carriers for information about the population of physicians who do not use paperless claims, we collected summary data about their collective Medicare claims activity, credentials, (primary-care) specialty, and group association. In addition we interviewed by telephone a number of carrier staff who are involved in promoting paperless claims and a number of knowledgeable observers outside the carriers. Finally, we drew heavily on the staff at HCFA's central and Boston regional offices for carrier reports, HCFA policy statements, and a sense of the agency's experience with and plans for paperless claims.

Some of the data we collected comes from databases maintained by HCFA and the carriers. We did not independently verify the integrity of these data. The HCFA continually monitors carrier performance and the quality of its own data center. We have no evidence to question the essential integrity of the data.

We conducted a mail survey, so we are not able to say with certainty who responded to the questionnaire. We assume that, if some physicians delegated the response to an associate or employee, the respondent spoke for the selected physician and that the survey answers fairly represent the physician's concerns and interest.

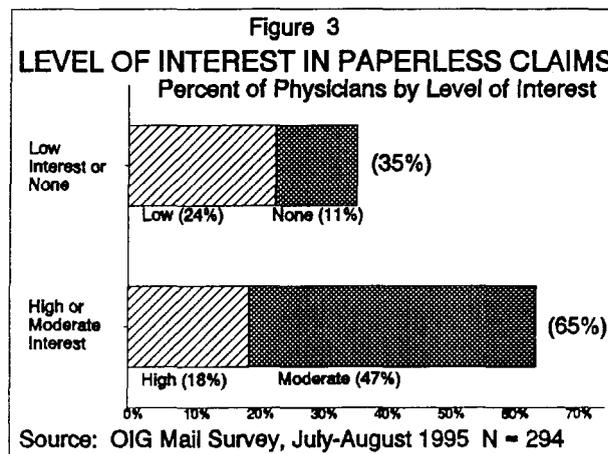
We completed our review in accordance with the *Quality Standards for Inspections* issued by the President's Council on Integrity and Efficiency

## FINDINGS

*Sixty-five percent of physicians who now submit Medicare claims on paper indicate a high or moderate level of interest in using paperless claims.*

A physician who indicates a high level of interest in using paperless claims is, according to the wording of our survey question, actively planning to start using them. Some respondents are involved in the transition process right now, while others indicate a firm intention to use paperless claims by the end of the survey year (1995). One physician included with the returned questionnaire a copy of a communication from his service vendor discussing tests of paperless claims they carried out on the same day of the response.

About a dozen respondents included with their answers to the survey explicit requests for additional information about paperless claims. Even some of the physicians with moderate interest indicated active shopping for paperless billing systems. Figure 3 gives a more detailed picture of the levels of interest indicated by responding physicians.



*Physicians with a high or moderate level of interest, as compared with those expressing a low level or no interest in paperless claims, are significantly more likely to:*

- be **younger** (44.9 years of age on average v. 50.9);

The average age of physicians (medical doctors) in the US is 45 years,<sup>9</sup> and the average age of all 294 physicians (with any one of six professional credentials) who responded to our survey questions is 48 years. But our sample is limited to physicians who use paper claims. It seems intuitive that younger physicians would be more receptive to technologically advanced practices such as use of paperless claims.

- **receive contacts** from sales or professional relations staffs, including Medicare, offering a system for paperless claims (an average 2.83 in the past year v. 1.59).

It appears that physicians are not swamped with contacts offering systems for paperless claims. In answering this question the physicians seem to have ignored mail advertising and credited only direct contacts with the physician (as contrasted to office staff.) About half the respondents reported no contacts; most reported 10 or fewer. Four (out of 246) reported from 20 to 30 contacts each.

*Physicians who responded to our survey with a high or moderate level of interest, as compared with those expressing a low level or no interest, were notably more likely to:*

- **use a computer** in the office (74 v. 43 percent), but the difference is not statistically significant for our sample size and design.

The office computer is widespread, even among physicians with little or no interest in paperless claims. A majority of respondents, 53 percent, at all levels of interest use a computer to prepare their Medicare claims, and 55 percent actually use the computer to print paper claims for mailing.

- be **Medicare participating** providers (69 v. 51 percent), but the difference is not statistically significant for our sample size and design.

The rate of paperless claims for participating physicians in 1994 was 74.2 percent, just slightly more than the 72.5 percent for all claims.<sup>7</sup> Participating physicians submitted 85 percent of all 126 million paper claims submitted by physicians on assignment in 1994, and 72 percent of all 149 million assigned paper claims from all submitters.

*Physicians with a high or moderate level of interest in using paperless claims do not differ significantly from their low or no interest level peers with regard to:*

- Medicare as a percent of practice income;

Medicare represents 19.62 percent of practice income for the physicians with high or moderate interest in paperless claims, and an almost identical 20.76 percent for those with little or no interest.

- average number of Medicare claims;

The Medicare carriers processed an average of 47 claims in December 1994 for physicians expressing high or moderate interest in paperless claims, compared to an average of 40 for those with low or no interest.

- professional credentials;

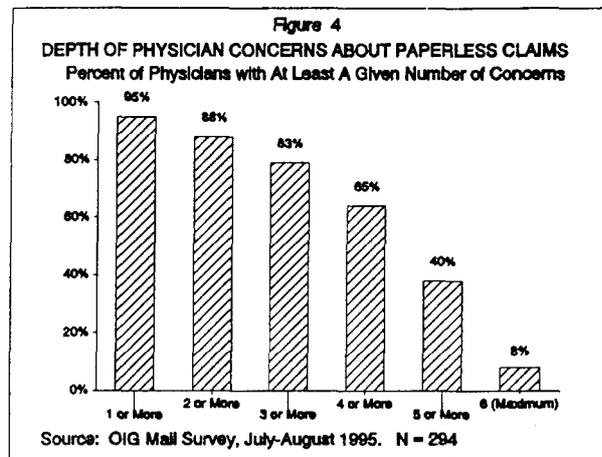
Among physicians with a high or moderate level of interest in paperless claims, a projected 56 percent hold the degree of medical doctor, while 57 percent of those with low or no interest are so credentialed.

- practice specialty.

Twenty-six percent of physicians with high or moderate interest in paperless claims have primary care specialties,<sup>10</sup> as compared with 15 percent of those with low or no interest.

***Eighty-three percent of physicians who submit Medicare claims on paper cite three or more concerns about using paperless claims.***

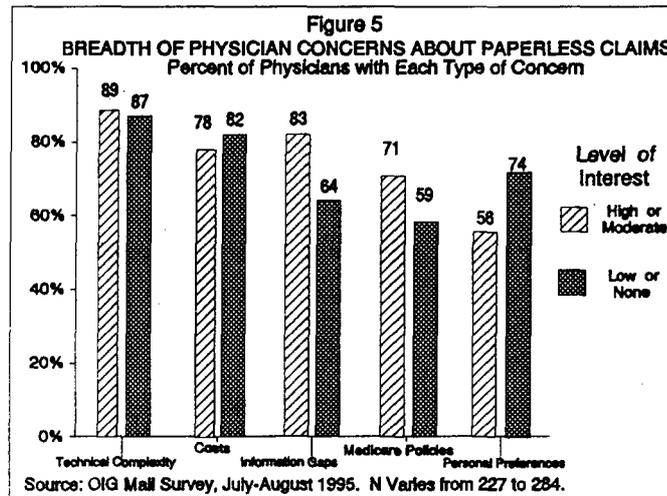
Almost all (95 percent) of the physicians responding to our survey indicate some concern in at least one of the areas listed on the questionnaire. And eight percent of them indicate concerns in all six categories we presented. Figure 4 shows the depth of physician concerns about paperless claims. Depth of concern is not critically sensitive to the physician's level of interest in using paperless claims.



For those physicians with a high or moderate level of interest in paperless claims, 86 percent cite three or more concerns about using paperless claims. Among these physicians 95 percent indicate concern in at least one area, and 6 percent in all six areas.

By comparison, for those physicians with a low or moderate interest in paperless claims, 78 percent cite three or more concerns about using paperless claims. And 95 percent of these physicians indicate concern in at least one area while and 13 percent indicate concern in all six areas.

The two concerns mentioned most often in responses to our survey, technical complexity and cost, apply about equally often to physicians with high or moderate interest in paperless claims and to those with low or no interest (see figure 5.) By contrast, the former group (more interested physicians) is significantly more often concerned about information gaps and Medicare policies and less often concerned about the impact of paperless claims on their personal preferences.



The types of concern cited by physicians are closely related to those previously recognized by HCFA and the carriers and identified in earlier reports from the OIG. They include:

**Technical Complexity.** Eighty-eight percent of the physicians note concerns about technical matters such as customizing data systems to individual practice, obtaining compatible billing software, or developing the capacity to include special narratives on claims. Among the physicians expressing a high or moderate level of interest in paperless claims, 89 percent cite technical concerns, as do 87 percent of those having a low interest in paperless claims.

*I would use it  
if it worked  
easily.*

*MD, New York*

*The expense  
involved is not  
cost-effective  
since we do  
not accept  
assignment.*

*DC, Minnesota*

**Costs.** Seventy-nine percent of the physicians raise concerns about costs. In the great majority of cases these concerns focus on hardware or software costs. Many physicians also cite concerns associated with training staff to process claims by computer. Seventy-eight percent of physicians with high or moderate interest in paperless claims raise such cost-related concerns, compared with 82 percent of those with low or no interest.

**Information Gaps.** Seventy-seven percent of the physicians point to informational uncertainties associated with use of paperless claims. These center around two particular matters: (1) possible difficulties involved in checking the status of paperless claims, and (2) potential access to documentation for the paperless claim process. Eighty-three percent of the physicians in the high or moderate interest category refer to such information gaps, as compared with 64 percent in the low interest category.

*My office is  
computer-wise,  
yet we have  
received no  
direction...*

*MD, Kansas*

*Medicare does  
make a lot of  
changes in  
policy and  
procedure.*

*MD, Minnesota*

**Medicare Policies.** Sixty-seven percent of the physicians indicate concerns about the administrative rules and regulations that govern use of paperless claims for Medicare. Many of these concerns lack a firm basis in Medicare policy. Physicians can mistakenly assume that Medicare puts limitations on use of paperless claims by certain types of physician, where no limits exist. Or physicians can misunderstand their capability for making edits to a paperless claim. Seventy-one percent of physicians with high or moderate interest mentioned policy concerns, as did 59 percent of those with low or no interest.

**Personal Preferences.** Finally, 62 percent of the physicians note various personal factors as inhibiting their interest in paperless claims. They invoke factors such as their age, discomfort with the computer, satisfaction with things as they are, difficulties with carrier and vendor staffs, or preference for different computer systems. Fifty-six percent of physicians expressing a high or moderate interest in paperless claims note their personal preference as a concern, compared with 74 percent of those expressing low interest.

*Computers  
have a way of  
changing the  
information,  
somehow.*

*OD, Indiana*

## RECOMMENDATIONS

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Our findings reveal a considerable reservoir of interest in the possibility of switching to paperless claims among the majority of physicians who are still using paper claims. This situation presents HCFA and the carriers a notable opportunity to foster additional voluntary conversions to paperless claims.

To take advantage of this opportunity, however, HCFA and the carriers will need to respond more completely to the concerns expressed by physicians who have been reluctant to make the switch thus far. Many of their concerns, it appears, could be addressed with clearer and more explicit explanations about the particulars and implications of paperless claims processing systems. Such explanations may be somewhat less responsive to concerns that center around costs, but even here, fuller information could help illustrate the potential cost effectiveness of paperless systems—for the physician as well as for Medicare and other payers.

We conclude that, through extended outreach, HCFA could influence many of the physicians still filing paper claims to switch voluntarily to paperless systems. At the same time, we recognize that not all of these physicians are likely to accept paperless claims and that HCFA needs to begin developing a policy framework that goes beyond expanded outreach, as a way of preparing for the day when the internally paperless Medicare Transaction System becomes fully operational.

In addition, we recognize that physicians will have increased incentive to switch to paperless claims as formats for electronic billing become increasingly standardized throughout the health care industry. A similar impact will follow from increased use of one-stop shopping, where insurers electronically route claims to other payers, and other techniques that serve to make the payment process more transparent to physicians.

Our two recommendations follow. The first (multi-part) recommendation focuses on measures that HCFA can take to reach out to that substantial group of physicians who seem reasonably open to switching to paperless claim submission for Medicare. The second recommendation addresses those who are less open to such a conversion.

***The HCFA should lead a targeted outreach effort to encourage voluntary conversion to paperless Medicare claim filing by physicians who now submit claims on paper and who have a moderate to high level of interest in making the switch.***

The HCFA and the Medicare carriers, as we have noted, have already undertaken considerable outreach efforts to encourage paperless claims processing. A second wave of outreach, targeted to those physicians who seem most inclined to make the change, could add significantly to prior successes. As an indication of the scope of the opportunity that exists, we note that if the physicians who expressed a high or moderate level of interest in using paperless claims actually made the switch:

- the Medicare administrative cost savings would be in a range between \$22 million and \$81 million annually;<sup>11</sup> and
- the volume of assigned paper claims Medicare receives from physicians would be reduced from 126 million to 45 million annually.<sup>12</sup>

Options for implementing this recommendation include:

- ▶ Enclose with claim payments to the targeted physicians a separate informational brochure on the advantages of paperless claims processing and a tear-off card that the physician could return to the carrier to learn more about paperless claims.
- ▶ Establish a 1-800 number which physicians could call to obtain information concerning paperless claims and which could be presented in informational advertisements in professional journals and in promotional materials.
- ▶ Conduct targeted mailings to Medicare participating physicians, since they are especially likely to be interested in using paperless claims. The mailing could include informational material and a tear-off card to return by those wishing to know more.
- ▶ Assume that any (probably younger and more mobile) physician applying for a new provider number wants to use paperless claims. Furnish information and transition support in setting up the paperless billing system. Provide the same service to a physician who notifies the carrier of an address change or new group affiliation.

Physicians who, through these contacts, express interested in making the switch to paperless claims can be further persuaded by such efforts as:

- ▶ Convene physicians (and/or their office representatives) in groups with their peers (and/or their representatives) who have already switched to paperless claims. Peers can convey the usefulness of paperless claims and address real concerns in the physician's context in a direct way that can effectively supplement the carrier's factual presentations.
- ▶ Send tightly focused informational materials to these physicians, specifically addressing concerns about technical complexity, costs, information gaps, and Medicare policies.
- ▶ Propose paperless claim submission as the normal choice with each new provider number assignment or change.

***The HCFA should begin to plan now for the policy changes that will become necessary to achieve an almost completely paperless environment for processing Medicare claims.***

The HCFA also must address how in the years ahead it will approach those physicians who continue to have little or no interest in paperless claims. It must do so in a way that reflects concerns not only for administrative efficiency, but also for the access to and quality of services for Medicare beneficiaries. Here, again, to reflect the scope of the opportunity, we note that if the physicians who express little or no interest made the switch, then:

- the additional Medicare administrative cost savings would be in a range between \$12 million and \$45 million annually, for a combined savings range between \$34 million and \$126 million annually;<sup>13</sup> and
- paper claims volume would fall to zero.

Among the policy options available to HCFA in addressing those physicians who have not converted voluntarily to paperless claims are the following:

- ▶ Target a date when all paperless claims submission will become a condition for Medicare participating physician status. Carrier representatives indicated that contractual requirements to use payers' paperless claim systems are becoming more common in managed care settings, even for affiliation of an independent physician office with a payer in a preferred provider arrangement.
- ▶ Target a somewhat later date when all physicians will be mandated to submit paperless claims. A 1994 amendment to the New York State public health law requires use of electronic (paperless) claims by physicians, but has yet to be implemented.
- ▶ Continue to accept paper claims directly into Medicare, but impose a filing fee to cover the incremental cost of doing so.

## AGENCY COMMENTS

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We sought comments on the draft report from HCFA. The HCFA concurred with both of our recommendations. We include the full text of HCFA's comments as appendix D.

In comments on our first recommendation, that it lead a targeted outreach effort to encourage voluntary conversion to electronic billing, HCFA noted that it offers positive incentives such as faster payments and free software. It has created a national standard enrollment form, and proactively participates in groups developing industry-wide standards. It also described ongoing efforts to streamline coding and data collection.

In comments on our second recommendation, that it plan now for policy changes necessary in a paperless environment, HCFA stated that it will look to create incentives for providers to abandon paper claims whenever possible.

*We appreciate HCFA's concurrence with our recommendations and its continuing initiatives to achieve the benefits of paperless claims.*

# APPENDIX A

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## SAMPLING AND ANALYSIS METHODS

### SAMPLING

We used a two-stage cluster sample to draw the sample of physicians for our mail survey. In the first stage we selected 8 of the 29 geographic carriers that process claims for Medicare using simple random sampling. Since we were interested in physician use of paperless claims, we ignored the specialized carriers such as those which process claims for durable medical equipment. And since most physicians who bill the Railroad carrier also bill the geographic carriers, we ignored the Railroad carrier also.

In the second stage we obtained from each of the 8 selected carriers the number of physician providers in their files not authorized to submit paperless claims to Medicare. We then selected 100 random numbers for each carrier, and requested the carrier to send us identifying and claims information for the provider corresponding to each random selection.

It was our intent, in this way, to have a sample of 800 physicians for the mail survey. We based the mail survey sample size of 800 physicians upon an anticipated 25 percent response rate experienced in earlier physician surveys. When we reviewed the information furnished by the 8 carriers, we noted that a majority of the provider numbers we originally selected were not used--no claims were processed during the time sampled.

Accordingly, to have approximately 800 mailings and expect about 200 responses, we inflated the sample by keeping the original 100 random numbers and generating the appropriate number of random spares. After we struck out the unused provider numbers, we were left with approximately 100 selected physician providers per carrier.

Some of the selections were numbers for billing groups, and we wanted to survey physicians. We asked the carriers to select at random one physician member of each such group, and used that person as the addressee on our mailing. In addition, we struck out of the selection multiple provider numbers corresponding to multiple practice locations or multiple members of a group practice.

As indicated here, we selected the sample from a population of billing numbers that is not in strict one-to-one correspondence with the population of physicians. Because we eliminated duplicates and inactive provider numbers, we believe the physician responses accurately reflect the concerns and interests of the physician population that continues to submit claims to Medicare on paper.

## ANALYSIS

We coded the answers to the closed-end questions in the survey questionnaire for the 366 responses we received to the 779 surveys we mailed—a gross response rate of 47 percent. However, 54 respondents answered the first screening question in the affirmative, thereby indicating that they do now use paperless claims for Medicare and hence are ineligible respondents in a survey of physicians who still use paper.

For the 312 eligible respondents we used standard computer programs to develop frequencies and percentages for their answers to the closed-end questions. Since ours was a two-stage cluster sample, we used standard statistical formulas to take the sample selection process into account in calculating results. Generally, the correction for the two-stage sample selection amounts to one or two percentage points.

For certain analyses it was appropriate to compare the set of answers to one question in the survey with those for a second question, or with some information provided by the carrier. Among the categories of information we looked at were age, group association, Medicare participating physician status, and number of claims processed. In the instance of a categorical variable (Medicare participation, for example), we used the chi-square test of statistics and assessed its significance at the 95 percent level of confidence. For continuous variables (age), we used the z test statistic, again assessing significance at the 95 percent level of confidence.

In order to expedite issuance of the draft report, we included only preliminary estimates of the percentages for survey responses. For example, with regard to Question 10 in the survey (the answers for which form the basis for the first finding):

294 physicians answered this question;

55 of the 294 indicated high interest in paperless claims (19%); and

132 of the 294 indicated moderate interest in paperless claims (45%).

The simple percentage of respondents with high or moderate interest in paperless claims is 64%.

Because we selected a two-stage cluster sample, we corrected this simple percentage in order to project the survey result to the entire population of physicians who submit paper claims to Medicare.

We estimated responses and comparisons using the Survey Data Analysis (SUDAAN) software package for multi-stage sample designs. In the body of this final report, we give percentages corrected for the sample size and design. Appendix B, however, gives the actual response numbers and uncorrected percentages.

# APPENDIX B

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## SURVEY QUESTIONS AND ANSWERS

We give here the frequencies and distributions of the answers to the closed ended questions in our mail survey. Questions 2F2, 3E2, 4E2, 5D2, 6D2, 7, 8F2, 9, and 11H2 invited open ended comments. All the percentages in appendix B refer to the raw data, and are not corrected for sample size or design.

QUESTION 1 SCREENING: *Please tell us whether you now use paperless claims for Medicare.*

TOTAL ANSWERS = 366  
YES (Y) = 54 NO (N) = 312  
YES (Y) = 15 % NO (N) = 85 %

QUESTION 2 CONCERNS: *We've listed below a number of concerns that physicians express about using paperless claims. Please indicate the degree to which you share each of them.*

QUESTION 2A: Concern about the cost of paperless claims.

TOTAL ANSWERS = 295  
MAJOR (J) = 146 MINOR (R) = 94 NOT A CONCERN (N) = 55  
MAJOR (J) = 49% MINOR (R) = 32% NOT A CONCERN (N) = 19%

QUESTION 2B: Concern about technical complexities associated with converting to paperless claims.

TOTAL ANSWERS = 294  
MAJOR (J) = 162 MINOR (R) = 94 NOT A CONCERN (N) = 38  
MAJOR (J) = 55% MINOR (R) = 32% NOT A CONCERN (N) = 13%

QUESTION 2C: Concern about certain Medicare policies associated with use of paperless claims.

TOTAL ANSWERS = 291  
MAJOR (J) = 71 MINOR (R) = 131 NOT A CONCERN (N) = 89  
MAJOR (J) = 24% MINOR (R) = 45% NOT A CONCERN (N) = 31%

QUESTION 2D: Concern about getting sufficient information relating to use of paperless claims.

TOTAL ANSWERS = 291  
MAJOR (J) = 99 MINOR (R) = 120 NOT A CONCERN (N) = 72  
MAJOR (J) = 34% MINOR (R) = 41% NOT A CONCERN (N) = 25%

QUESTION 2E: *Concern about paperless claims just not fitting in with my personal preference.*

TOTAL ANSWERS = 293  
MAJOR (J) = 81 MINOR (R) = 88 NOT A CONCERN (N) = 124  
MAJOR (J) = 28% MINOR (R) = 30% NOT A CONCERN (N) = 42%

QUESTION 2F1: Concern about something else.

TOTAL ANSWERS = 115

MAJOR (J) = 66 MINOR (R) = 6 NOT A CONCERN (N) = 43

MAJOR (J) = 57% MINOR (R) = 5% NOT A CONCERN (N) = 37%

QUESTION 3 COST CONCERNS: *Please indicate with a X or check mark which are concerns.*

*[For Questions 3 through 6 an answer coded "Yes" means the respondent marked the box labeled "Concern" and "No" means the box labeled "Not A Concern" was marked.]*

QUESTION 3A: Cost of hardware, software, or phone tolls.

TOTAL ANSWERS = 296

YES (Y) = 244 NO (N) = 52

YES (Y) = 82 % NO (N) = 18 %

QUESTION 3B: Cash flow during the transition to paperless claims.

TOTAL ANSWERS = 290

YES (Y) = 106 NO (N) = 184

YES (Y) = 37 % NO (N) = 63 %

QUESTION 3C: Cost of training and retraining staff.

TOTAL ANSWERS = 292

YES (Y) = 170 NO (N) = 122

YES (Y) = 58 % NO (N) = 42 %

QUESTION 3D: Lack of opportunity to pool costs with other physicians.

TOTAL ANSWERS = 281

YES (Y) = 107 NO (N) = 174

YES (Y) = 38 % NO (N) = 62 %

QUESTION 3E1: Something else.

TOTAL ANSWERS = 38

YES (Y) = 19 NO (N) = 19

YES (Y) = 50 % NO (N) = 50 %

QUESTION 4 TECHNICAL CONCERNS:

QUESTION 4A: Incompatibility with other billing software or general office operations.

TOTAL ANSWERS = 281

YES (Y) = 174 NO (N) = 107

YES (Y) = 62 % NO (N) = 38 %

QUESTION 4B: Limited ability to handle special narratives.

TOTAL ANSWERS = 276

YES (Y) = 124 NO (N) = 152

YES (Y) = 45 % NO (N) = 55 %

QUESTION 4C: Threats to privacy or integrity of data.

TOTAL ANSWERS = 277  
YES (Y) = 72 NO (N) = 205  
YES (Y) = 26 % NO (N) = 74 %

QUESTION 4D: Difficulty customizing data systems to individual practice.

TOTAL ANSWERS = 284  
YES (Y) = 184 NO (N) = 100  
YES (Y) = 65 % NO (N) = 35 %

QUESTION 4E1: Something else.

TOTAL ANSWERS = 34  
YES (Y) = 14 NO (N) = 20  
YES (Y) = 41 % NO (N) = 59 %

QUESTION 5 POLICY CONCERNS:

QUESTION 5A: Prohibition of reassignment.

TOTAL ANSWERS = 250  
YES (Y) = 90 NO (N) = 160  
YES (Y) = 36 % NO (N) = 64 %

QUESTION 5B: Tie-in between paperless claims and Direct Deposit of Medicare payment.

TOTAL ANSWERS = 266  
YES (Y) = 106 NO (N) = 160  
YES (Y) = 40 % NO (N) = 60 %

QUESTION 5C: Possibility of filing fees for Medicare claims.

TOTAL ANSWERS = 274  
YES (Y) = 173 NO (N) = 101  
YES (Y) = 63 % NO (N) = 37 %

QUESTION 5D1: Something else.

TOTAL ANSWERS = 25  
YES (Y) = 7 NO (N) = 18  
YES (Y) = 28 % NO (N) = 72 %

QUESTION 6 INFORMATION CONCERNS

QUESTION 6A: Difficulty checking status of a paperless claim.

TOTAL ANSWERS = 282  
YES (Y) = 172 NO (N) = 110  
YES (Y) = 61 % NO (N) = 39 %

QUESTION 6B: Quality of Medicare carrier efforts to publicize paperless claims.

TOTAL ANSWERS = 268  
YES (Y) = 96 NO (N) = 172  
YES (Y) = 36 % NO (N) = 64 %

QUESTION 6C: Accessible documentation for the paperless claim process.

TOTAL ANSWERS = 275  
YES (Y) = 167 NO (N) = 108  
YES (Y) = 61 % NO (N) = 39 %

QUESTION 6D1: Something else.

TOTAL ANSWERS = 24  
YES (Y) = 8 NO (N) = 16  
YES (Y) = 33 % NO (N) = 67 %

QUESTION 8 ADDRESSING CONCERNS: *Please indicate with an X or check mark any concerns Medicare could effectively address, and by doing so might help you start using paperless claims.*

*[An answer coded "Yes" means the respondent indicated that type of concern, a "No Answer" means no mark was made.]*

QUESTION 8A: COST--Provide financial incentives, such as higher payment for paperless claims or waiver of fees.

TOTAL RESPONSES = 312  
YES (Y) = 199 NO ANSWER (Z) = 113  
YES (Y) = 64 % NO ANSWER (Z) = 36 %

QUESTION 8B: TECHNICAL COMPLEXITY--Simplify the electronic billing process, such as developing wider coordination of benefits or more user-friendly interfaces.

TOTAL RESPONSES = 312  
YES (Y) = 181 NO ANSWER (Z) = 131  
YES (Y) = 58 % NO ANSWER (Z) = 42 %

QUESTION 8C: MEDICARE POLICIES--Change Medicare policies, such as eliminating the 90-percent rule or ensuring tighter data security.

TOTAL RESPONSES = 312  
YES (Y) = 94 NO ANSWER (Z) = 218  
YES (Y) = 30 % NO ANSWER (Z) = 70 %

QUESTION 8D: INSUFFICIENT INFORMATION--Open access, such as making available online checking of claim status, or a phone-in information line.

TOTAL RESPONSES = 312  
YES (Y) = 158 NO ANSWER (Z) = 154  
YES (Y) = 51 % NO ANSWER (Z) = 49 %

QUESTION 8E: PERSONAL FACTORS--Demonstrate that paperless claims can benefit me.

TOTAL RESPONSES = 312  
YES (Y) = 156 NO ANSWER (Z) = 156  
YES (Y) = 50 % NO ANSWER (Z) = 50 %

QUESTION 8F1: SOMETHING ELSE--.

TOTAL RESPONSES = 312  
YES (Y) = 25 NO ANSWER (Z) = 287  
YES (Y) = 8 % NO ANSWER (Z) = 92 %

QUESTION 10 INTEREST: *Please indicate your overall level of interest in using paperless claims for Medicare.*

TOTAL ANSWERS = 294  
HIGH (H) = 55 MODERATE (M) = 132 LOW (L) = 68 NONE (N) = 39  
HIGH (H) = 19% MODERATE (M) = 45% LOW (L) = 23% NONE (N) = 13%

QUESTION 11 ABOUT YOUR OFFICE: *Please answer some questions about your Medicare billing.*

QUESTION 11A: Do you use a computer in your office?

TOTAL ANSWERS = 303  
YES (Y) = 195 NO (N) = 108  
YES (Y) = 64 % NO (N) = 36 %

QUESTION 11B: Do you use a computer to prepare Medicare claims?

TOTAL ANSWERS = 303  
YES (Y) = 162 NO (N) = 141  
YES (Y) = 53 % NO (N) = 47 %

QUESTION 11C: Do you use a computer to print paper claims to be mailed in to the Medicare carrier?

TOTAL ANSWERS = 301  
YES (Y) = 165 NO (N) = 136  
YES (Y) = 55 % NO (N) = 45 %

QUESTION 11D: Does your office bill directly, or do you use a billing service?

TOTAL ANSWERS = 290  
OFFICE (O) = 275 SERVICE (S) = 15  
OFFICE (O) = 95 % SERVICE (S) = 5 %

QUESTION 11E: Do you use paperless claims for any payer?

TOTAL ANSWERS = 299  
YES (Y) = 17 NO (N) = 282  
YES (Y) = 6 % NO (N) = 94 %

QUESTION 11F: Roughly what percent of your practice's income is attributable to Medicare?

NUMBER OF ANSWERS = 259

HIGH = 90 %    LOW = 0 %

AVERAGE (MEAN) = 20.98 %    STANDARD DEVIATION = 19.75 %

QUESTION 11G: Including Medicare, approximately how many contacts have you had in the past year, offering a system for paperless claims?

NUMBER OF ANSWERS = 252

HIGH = 30    LOW = 0

AVERAGE (MEAN) = 2.33    STANDARD DEVIATION = 3.27

QUESTION 11H1: Do these contacts serve to increase your concern about paperless billing for Medicare?

TOTAL ANSWERS = 217

YES (Y) = 65    NO (N) = 152

YES (Y) = 30 %    NO (N) = 70 %

# APPENDIX C

## NONRESPONSE ANALYSIS

In a survey based on a random sample we need to consider the possibility that bias may be introduced through self-selection by the respondents. To determine whether significant differences exist in this survey we compared the two groups, respondents and nonrespondents, by age, group association, Medicare participation, number of Medicare claims, and amount allowed by Medicare.

### *Analysis by Age*

The average age for the 366 physicians who responded to the survey is 47.7 years. We calculated age on July 1, 1995 by subtracting the date of birth given in carrier records. For the "age" of a group practice, we substituted the date of birth of one physician member selected at random by the carrier. We use the age of the subject physician for analysis, although we recognize that the survey may have been completed by an associate or employee.

By comparison, the average age for 414 nonrespondent physicians is 48.5 years. For the nonrespondent analyses we count as respondents the 54 physicians who answered the first screening question in the affirmative. These physicians responded substantively to the survey, although they excluded themselves from additional analyses by identifying themselves as ineligible--they do use paperless claims now.

We tested the significance of the age difference between respondents and nonrespondents by applying the standard z-test procedure to the data. The calculated z value is 0.969, which is not statistically significant at the 95 percent confidence level. We conclude that there is no difference between respondents and nonrespondents by age at the 95 percent confidence level.

### *Analysis by Group Association*

We define group association as it is coded in carrier records, which they maintain for Uniform Provider Identification Number (UPIN) purposes. The percentages of respondents and nonrespondents by group affiliation are:

COMPARISON BY GROUP ASSOCIATION							
	RESPONDENTS (Note)		NON- RESPONDENTS		TOTAL		PERCENT RESPONDING
	Number	Percent	Number	Percent	Number	Percent	
GROUP	143	39 %	146	35 %	289	37 %	49 %
NON- GROUP	222	61 %	267	65 %	489	63 %	45 %
TOTAL	365	100 %	413	100 %	778	100 %	47 %

**Note:** One respondent physician was not coded for group association in data supplied by the carrier.

We used the chi-square test to look for a difference between respondents and nonrespondents by group association. The computed chi-square value of 1.22 is not statistically significant at the 95 percent confidence level. We conclude that there is no difference between respondents and nonrespondents by group association at the 95 percent confidence level.

***Analysis by Medicare Participation***

We use the Medicare participation indicator coded in carrier records, which they maintain for Uniform Provider Identification Number (UPIN) purposes. The percentages of respondents and nonrespondents by Medicare participating status is:

COMPARISON BY MEDICARE PARTICIPATION							
	RESPONDENTS		NON-RESPONDENTS		TOTAL		PERCENT RESPONDING
	Number	Percent	Number	Percent	Number	Percent	
PARTICIPATING	244	67 %	257	62 %	501	64 %	49 %
NOT PARTICIPATING	122	33 %	156	38 %	278	36 %	44 %
TOTAL	366	100 %	413	100 %	779	100 %	47 %

We used the chi-square test to look for a difference between respondents and nonrespondents by Medicare participation. The computed chi-square value of 1.67 is not statistically significant at the 95 percent confidence level. We conclude that there is no difference between respondents and nonrespondents by Medicare participating physician status at the 95 percent confidence level.

***Analysis by Number of Medicare Claims***

We asked the carriers to include among the data they supplied for each of the sample physicians the number of Medicare claims processed during December 1994, as one measure of that provider's level of Medicare activity. The average number of claims for physicians who responded to the survey is 53, and the average for nonrespondents is 45.

We tested the significance of the difference in numbers of claims between respondents and nonrespondents by applying the standard z-test procedure to the data. The calculated z value is 1.324, which is not statistically significant at the 95 percent confidence level. We conclude that there is no difference between respondents and nonrespondents by Medicare activity, as measured by number of claims, at the 95 percent confidence level.

***Analysis by Amounts Allowed***

We also asked the carriers to include among the data they supplied for each of the sample physicians the total amount allowed for Medicare claims processed during December 1994, as one measure of that provider's level of Medicare activity. The average amount allowed for physicians who responded to the survey is \$3535 and the average for nonrespondents is \$2908.

We tested the significance of the difference in allowed amounts between respondents and nonrespondents by applying the standard z-test procedure to the data. The calculated z value is 1.230, which is not statistically significant at the 95 percent confidence level. We conclude that there is no difference between respondents and nonrespondents by Medicare activity, as measured amount allowed, at the 95 percent confidence level.

# **APPENDIX D**

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## **AGENCY COMMENTS ON THE DRAFT REPORT**



DATE: MAR 15 1996

TO: June Gibbs Brown  
Inspector General

FROM: Bruce C. Vladeck  
Administrator

A handwritten signature in black ink, appearing to read "Bruce C. Vladeck", written over the printed name and title.

SUBJECT: Office of Inspector General Draft Report, "Encouraging Physicians to Use Paperless Claims," (OEI-01-94-00230)

We reviewed the above-referenced report on encouraging physicians to use paperless claims for filing Medicare reimbursement forms. Attached are our comments on the report recommendation.

Thank you for the opportunity to review and comment on this draft report.

Attachment

Comments of the Health Care Financing Administration (HCFA)  
on Office of Inspector General (OIG)  
Draft Report: "Encouraging Physicians to Use Paperless Claims,"  
(OEI-01-94-00230)

OIG Recommendation 1

HCFA should lead a targeted outreach effort to encourage voluntary conversion to paperless Medicare claim filing by physicians who now submit claims on paper and who have a moderate to high level of interest in making the switch.

HCFA Response

We concur. HCFA continues to lead the health care industry in promoting the switch to electronic claims through many avenues, including some of the methods recommended in the report.

We have offered positive incentives to electronic billers including faster payments, free billing and remittance-advice-receiving software, electronic claims status checking, electronic eligibility inquiry and response, and national standard electronic remittance advice with which a provider may automate in-house posting. We have also created a nationally standardized Medicare electronic data interchange enrollment form for providers which replaces the many contracts formerly required for the separate carriers. Six times annually, we attend the American National Standards Institute meetings to work with and influence payers, providers, insurance companies, and other health care entities in developing industry-wide standards. In addition, we are pro-active participants in the National Uniform Claims Committee, the National Uniform Billing Committee, and the X12N Insurance Subcommittee. We are also studying the feasibility and cost effectiveness of other outreach opportunities available to us so that we may continue to lead in outreach efforts. We would like to point out; however, that the report recommendations presume a fully funded administrative and contractor budget and that with reduced budgets there will be some tradeoffs.

Many of the physicians surveyed worry about information gaps and the inability of electronic claims to capture case specific documentation which periodically accompanies a paper claim. To reduce the need for extra documentation, HCFA has begun to create a new series of codes and/or specific fields on the paperless claims that describes: patient information that currently cannot be communicated in the ICD-9 codes; item/service information required by the carrier; and administrative information (such as the date of a specific procedure). These codes will be effective in 1997. We have also formed a workgroup to develop methods to decrease the amount of unsolicited documentation that

Page 2

accompanies claims. We hope physicians will be encouraged by these technical improvements which will make paperless claims more efficient and case specific. Physicians are also reluctant to adopt a computerized atmosphere due to the costs incurred in training personnel and in obtaining compatible customized software. We believe that with increased participation in electronic billing, software packages will become more readily available and less expensive. We anticipate the switch to paperless claims will require initial training; however, the time and money saved in the long term will compensate for the initial outlay.

#### OIG Recommendation 2

HCFA should begin to plan now for the policy changes that will become necessary to achieve an almost completely paperless environment for processing Medicare claims.

#### HCFA Response

We concur. HCFA is preparing for the necessary policy changes through many of the ways recommended by the OIG. We plan on targeting a date to move to electronic billing and will look to create incentives for providers to abandon paper claims wherever possible.

#### Additional Comments

As in the Medicare program, there is much interest in the use of electronic means to exchange data and transmit claims in the Medicaid programs. HCFA's Medicaid Bureau (MB) recently conducted a survey of the Electronic Data Interchange (EDI) capabilities and the electronic media claims activities for each State Medicaid agency. They are in the process of putting together a report of their findings that will be available to interested parties. The results will be beneficial to both the public and private sectors as a guide in determining comparability among Medicaid agencies dealing with EDI activities. We will be glad to provide the OIG with a copy of the /report or answer any questions concerning this survey.

# APPENDIX E

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## ENDNOTES

1. The statutory basis for Medicare is contained in Title XVIII of the Social Security Act, as amended, 42 U.S.C. 1395ff. For a popular summary of Medicare see *Your Medicare Handbook 1995*, Publication No. 10050, U.S. Department of Health and Human Services, Health Care Financing Administration, Baltimore, MD.
2. U.S. Department of Health and Human Services, Health Care Financing Administration, private communication from Office of Financial and Human Resources. See also Social Security Administration, *Social Security Bulletin, Annual Statistical Supplement 1995*, Tables 8.B4 and 8.B5, pages 327 and 328.
3. U.S. Department of Health and Human Services, Health Care Financing Administration, private communication from Office of Financial and Human Resources. See also U.S. Department of Health and Human Services, Health Care Financing Administration, *Strategic Plan for Information Resources Management (FY 1996—2000)*, Chapter II, Section B. "Strategic Planning Assumptions," page 7.
4. For an indication of current trends see, for example, the agenda for the *Automated Medical Payments Conference VI*, held in Boston, MA, May 11-12, 1995.
5. Workgroup for Electronic Data Interchange, *Report*, Washington DC, October 1993.
6. U.S. Department of Health and Human Services, Health Care Financing Administration, Memorandum dated November 16, 1992 from Director, Bureau of Program Operations to All Regional Administrators, "Electronic Media Claims (EMC) Goals for Fiscal Year 1993;" and Memorandum dated November 4, 1993, "Electronic Media Claims (EMC) Goals for Fiscal Year 1994."
7. Based on Carrier Monthly Workload Reports, Form HCFA-1565.
8. Mary E. Warren et al., "Medicare Transaction System: Platform for Change," *Health Care Financing Review* 16 (Winter 1994) 2:191-200. For a popular summary see Spencer Rich, "Medicare Billing to Join Electronic Superhighway One National System to Handle All Payments," *The Washington Post*, January 24, 1994.
9. American Medical Association, personal communication.
10. We took general practice, family practice, internal medicine, pediatrics, and obstetrics/gynecology as the primary care specialties. This classification follows

that used by Medicare for incentive payments to physicians in Health Professional Shortage Areas.

11. We used a range of estimates for the savings to the payer (Medicare) for each claim switched from paper to paperless. The range of estimates comes from the following sources:

The Workgroup on Electronic Data Interchange (Endnote 5, 1993) estimated that savings to the payer would range from approximately \$0.50 to \$1.50.

The HCFA's own operating assumption, based on their informal canvas of carriers in 1989, that savings would approximate \$0.50.

Another OIG report, *Review of Medicare Providers and Electronic Claims Processing*, (A-05-94-00039), found an analysis prepared by one Medicare contractor which indicated savings of \$0.27 per Part B claim.

Based on the estimates cited above, we believe that it is reasonable to expect savings in the range of \$0.27 to \$1.00 per part B claim.

According to reports submitted by the carriers to HCFA, approximately 126 million assigned physician claims were submitted on paper and processed during calendar year 1994. Based on the findings of our survey, about 65 percent of these, or 81 million claims, were submitted by physicians with a high or moderate interest in using paperless claims. Applying the \$0.27 to \$1.00 per claim unit savings figures described above, we estimated a potential savings of \$22 million to \$81 million.

In making these estimates, we assumed that physicians with high or moderate interest in using paperless claims submit, on average, the same number of claims as those with low or no interest. In our sample, the former submitted an average 48 claims in December 1994, and the latter averaged 35. If we took this assumption into account, our estimates would be made larger.

On the other hand, we also assumed that we could ignore the submission of paper claims by physicians already authorized to submit paperless claims. If we took this assumption into account, our estimates would be made smaller. On balance, we assume that these two simplifying assumptions approximately offset each other.

12. In 1994 physicians submitted 126 million assigned Medicare claims on paper. Applying the survey result that 65 percent of physicians have high or moderate interest in switching:

$0.65 \times 126 \text{ million} = 81 \text{ million claims would be switched from paper to paperless.}$   
or  $126 - 81 = 45 \text{ million claims would remain as paper submissions.}$

As before, we assume equal average claims volumes for both classes of physician interest, and ignore paper claims coming from physicians already authorized paperless billing.

13. We found that 35 percent of the physicians in our survey indicated low or no interest in using paperless claims. Using the same assumptions as before, we applied this percentage to the 126 million assigned physician claims processed by the carriers during calendar year 1994. We expect that these physicians submitted 45 million paper claims in that year.

With unit savings figures of \$0.27 to \$1.00, we estimated potential savings of \$12 million to \$45 million, if all the physicians who indicated low or no interest in paperless claims made the switch.

By adding these estimates to those for the physicians with high or moderate interest in using paperless claims, we derived a range of combined savings estimates of \$34 million to \$126 million.

In the contemporaneous OIG report, the two unit savings figures were applied to a hard copy (paper) claims volume of 134.6 million estimated for providers who submitted 50 or more claims per month. The range of combined savings estimates derived in this way would be between \$36.3 million and \$134.6 million.