CAPITAL NEEDS

OF

SMALL RURAL HOSPITALS

FINAL REPORT

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EXECUTIVE SUMMARY

Small rural hospitals are aging and may be in need of repair or replacement. Concerns regarding the aging of these small rural hospitals have led to the introduction of legislation that would create a new Federal loan program for hospitals with under 50 beds. The program would also provide small grants for capital planning.

There has been a lack of research on hospitals' capital needs and on whether hospitals can currently access the capital needed to modernize their facilities. Concerns regarding the physical and financial condition of these hospitals motivated us to complete this study of small rural hospitals' capital needs and access to capital.

To gain insights into the capital needs of small rural hospitals, a survey was mailed to 950 rural hospitals with under 50 beds. The survey asked respondents to estimate the total cost of bringing their facility into compliance with current laws, including fire codes and the requirements of state inspection agencies. The survey also asked respondents to estimate their facilities' costs of borrowing and ability to borrow. Responses to these and other survey questions were combined with hospital financial data from Medicare cost reports in order to compare the hospitals' financial resources to their capital needs.

The survey was first mailed in September 2001, and non-respondents were mailed a second copy of the survey in November 2001. By December 15, 2001, a total of 276 responses were received, a 29 percent response rate. The key survey results are:

- Among respondents, **38 percent report having deficiencies "that, by law, require renovation or remodeling."** Respondents reported deficiencies in areas such as sprinkler systems, roofs, Americans with Disabilities Act (ADA) compliance, compliance with the Health Insurance Portability and Accountability Act (HIPAA) privacy regulations, as well as heating, ventilation and air-conditioning systems.

- Among the respondents with deficiencies, **the median cost of correcting the deficiencies was reported to be $1,000,000.**

- **Most hospitals will need to borrow funds to fix these deficiencies**. An analysis of hospital financial statements indicates that the reported cost of correcting deficiencies exceeds the hospital's historical level of cash and investments for 55 percent of hospitals that estimated their cost of correcting deficiencies.

- **Most responding hospitals have the ability to borrow funds**. Of the 221 respondents who were able to estimate their cost of capital, 178 (81 percent) stated that they would be able to obtain a loan for $1,000,000.

- As Table 1 indicates, the **hospitals that report not being able to obtain loans tend to be older, low-volume hospitals with operating losses**. Of 42 hospitals with cost report data that stated they could not qualify for a $1 million dollar loan, 40 have historically generated negative operating margins (illustrated in Appendix B), and a majority generated negative total margins.

Table 1: Capital Needs and Patient Volume At Rural Hospitals with Under 50 Beds

Number of Admissions, 1998	**0-499 n=90***	**500-999 n=99***	**1000-1,999 n=59***	**2,000+ n=14***
Mean revenue in 1998	$4 million	$7 million	$12 million	$20 million
Percent of hospitals with positive operating income 1996-1998	10%	33%	44%	71%
Mean net margin 1996-1998	0.3%	2.7%	4.3%	6.5%
Percent** that could obtain a $1 million dollar loan	67%	80%	94%	100%
Average age[1] of plant and equipment	15.1 years	11.8 years	10.7 years	10.2 years
Percent** of hospitals reporting deficiencies	41%	40%	32%	29%
Mean cost of correcting deficiencies	$1.4 million	$2.1 million	$2.5 million	$4.6 million

[1]Estimated Age= 1998 depreciation / accumulated deprecation expense.
***Number of responding hospitals that could be matched with cost report data.**
****Percentages are calculated as a percentage of yes and no responses ignoring "don't know" responses.**

CONCLUSIONS

A significant number of small rural hospitals need capital improvements and will need to borrow for these investments. While a majority of these hospitals can obtain loans, a

significant minority lacks access to capital through current sources. The hospitals that lack access are often in poor financial condition and typically provide a low volume of services. Due to these hospitals' poor financial condition, a new Federal loan program does not appear to be the answer to their capital needs. Many of these hospitals cannot afford additional debt service payments, and most would have difficulty qualifying for new loans unless the underwriting criteria were unusually lenient.

Improving access to capital is dependent on improving hospitals' profitability. However, Congress may be reluctant to provide additional Medicare reimbursement to these facilities. Eighty-three percent of the hospitals in our survey that lacked access to private loans are already receiving a form of cost-based reimbursement from Medicare, either as Critical Access Hospitals (57 percent), Sole Community Hospitals (21 percent), or Medicare Dependent Hospitals (5 percent). While Medicare is paying these hospitals based on their costs, cost-based reimbursement does not help fund the cost of non-Medicare uncompensated care. Hospitals receiving cost-based Medicare payments can have negative overall profit margins and access to capital difficulties if their revenue from privately insured patients (and other sources) is not sufficient to cover their bad debts from uninsured and underinsured patients.

Policy makers have at least three options for assisting hospitals that suffer losses and have a lack of access to capital due to the burden of uncompensated care. First, Medicare policy could provide hospitals in regions with very few patients a low-volume adjustment that would allow low-volume hospitals to earn a profit on Medicare patients (not just recover costs). Medicare profits could help pay for the cost of uncompensated care provided to non-Medicare patients and build reserves for capital improvements. Second, Medicare policy could be adjusted to allow Medicare to directly pay a portion of hospitals' charity care and bad debt burdens. Federal assistance with uncompensated care burdens could be justified if policy

makers conclude that uncompensated care is partially a Federal responsibility as opposed to being a burden that must be borne entirely by local tax payers, local donors, and the privately insured.

Third, policy makers could set up a technical assistance program operated at the state level to assist rural hospitals in improving their financial condition. The technical assistance officers could work with hospitals and lenders such as the USDA. The lenders could provide benchmarks that the hospitals must reach to qualify for loans or loan guarantees. The hospitals would have a financial incentive to work with consultants to reach these benchmarks even if improved financial performance requires tough decisions such as reducing staffing or services.

INTRODUCTION

The National Advisory Committee on Rural Health (2000) has expressed concern that rural hospitals built with Hill-Burton grants are aging and in need of repair or replacement. From 1946 through 1974 when the program was abolished, Hill-Burton funds were used to construct or modernize 5,787 hospitals. In exchange for Hill-Burton funds, the hospital made certain commitments to provide charity care (Lave and Lave, 1974). Obtaining Hill-Burton grants was particularly important for hospitals in markets with low patient volumes because hospitals in these types of markets often have difficulty generating enough operating revenue to cover their capital costs (MedPAC, 2001). Hospitals in low-volume markets may use their charitable donations and local government support to cover operating losses, and thus have limited funds remaining for servicing additional debt. Concerns regarding the aging of small rural hospitals have led to the introduction of legislation that would create a Federal loan program for hospitals with under 50 beds. The program would also provide small grants for capital planning.

While there has been significant concern over the aging of hospitals, and bills have been introduced in Congress to address the problem, there is little research documenting the capital needs of rural hospitals nationally. A single-state study of rural hospitals' capital needs was conducted by the Minnesota Department of Health during the summer of 2000. The Minnesota study found that 40 percent of Minnesota's rural hospitals with under 50 beds needed to make capital improvements to bring their facility into compliance with the regulations of state agencies such as the Fire Marshall and Department of Health (Minnesota Department of Health, 2001). The mean cost of bringing the hospitals into compliance was $705,000 per hospital. To

bring the hospitals into compliance and meet all other needs that survey respondents categorized as "urgent" would cost over $2,000,000 per hospital.

In this national study, we surveyed small rural hospitals from across the United States to document their capital needs and evaluate whether the capital markets are meeting these needs.

METHODS

Sample Selection & Methodology

A list of 950 rural hospitals with under 50 beds was obtained from the American Hospital Association (AHA). The list was derived from the AHA's national database of hospitals, which is designed to include hospitals that are not members of the AHA. These 950 hospitals were mailed a copy of the survey in mid-September 2001. A second mailing of the survey was sent in the middle of November 2001 to those hospitals that had not responded to the first mailing.

Survey Design

This study's survey was designed to assess small rural hospitals' capital needs and access to available sources of capital. A copy of the survey is shown in Appendix A. The first part of the survey inquires about hospitals' capital needs and is similar to the survey conducted by the State of Minnesota. The second half of the survey asks hospitals about their sources of capital and the cost of obtaining loans.

Assessing Capital Needs. The assessment of capital needs is divided into two categories. Respondents are asked to estimate the total cost of bringing their facility into compliance with current laws, including fire codes and the requirements of state inspection agencies (Question 10). Because Question 10 includes only capital improvements that are required by law, it

provides more objective but conservative estimates of hospitals' total capital needs. To capture capital needs beyond regulatory compliance, we ask a second question where capital needs are broadly defined. Question 13 asks hospitals to report on the cost of improving the hospital to the degree necessary to "adequately serve" the community; this question is designed to elicit the hospital's total desired level of capital improvements. While Questions 10 and 13 seek to quantify the costs of capital improvements, Questions 11 and 12 ask respondents to prioritize their needs and to list the cost of addressing these needs. The objective of these two questions is to further describe the needed and desired improvements at rural hospitals.

Assessing Sources of Capital. The second half of the survey is designed to assess hospitals' ability to obtain financing for capital improvements and their desire to apply for loans. We begin by asking respondents whether existing Federal programs (e.g., FHA/HUD 242 Loans) meet their needs, and for their preferred sources of capital. We then ask for their estimate of the interest and loan guarantee costs associate with obtaining a one-million-dollar loan. Hospitals could estimate a specific cost of capital or state that their facility could not currently qualify for a million-dollar loan. Next, we ask if the hospital was unable to complete a project in the past few years due to being denied a loan.

To assess the unmet demand for loans, we ask respondents whether their hospital would be interested in borrowing funds from a hypothetical Federal loan fund at 8 percent interest. The 8 percent rate was chosen so that hospitals that already have access to lower-cost capital would not indicate that they are interested in the potential new Federal loan program. If a hospital would borrow at 8 percent, it indicates a demand for loans that is not currently being met with lower-interest loans. Hospitals in this situation could be said to have an unmet demand for capital.

When assessing hospitals' ability to secure financing, survey data are supplemented with 1996-1998 financial statement data that are publicly available from the Centers for Medicare and Medicaid Services (CMS). These financial statements are used to evaluate each hospital's historical levels of income and financial reserves. These financial data allow us to evaluate objectively whether the hospital would qualify for FHA guarantees under the HUD 242 loan program as well as to examine the hospital's capital needs relative to its historical level of financial reserves. One limitation of this analysis is that the financial statement data reflect historical profitability, while the survey reflects current capital needs. Some study hospitals converted to Critical Access Hospital status after 1998. For these facilities, it is possible that cost-based Medicare payments have improved their financial condition relative to the 1996 to 1998 period.

The importance of renovating and/or replacing specific rural hospitals will, in part, depend on whether patients in the region have alternative sources of emergency and inpatient care. To evaluate the distance between hospitals that lack access to capital for repairs and other facilities, survey data are combined with the Medicare Impact File from CMS. This file includes a variable that indicates the distance to the next closest hospital.

RESULTS

Respondents

We received 276 responses, for a 29 percent response rate. Of the 276 respondents, 86 percent were hospital administrators and 12 percent were chief financial officers. Due to the fairly low response rate, it is important to consider whether survey respondents are representative of the full population of 950 small rural hospitals. We take several steps to assess the extent of non-response bias. First we compared financial data (cost reports) from

respondents and non-respondents. Second, we conducted a short follow-back survey of 5 percent of the non-respondents (n=34), selected at random. These non-responding hospitals were contacted by phone and asked four central questions about their capital needs and access to capital. In general, the analysis of financial data suggests that respondents and non-respondents have a similar distribution of financial characteristics and, on average, have facilities that are of a similar average age. However, the follow-back survey indicates that respondents may have greater capital needs than non-respondents. The results from the telephone survey of non-responders, the financial comparison of non-responders to responders, and a discussion of the potential for nonresponse bias are included in Appendix C.

Historical Sources of Funding

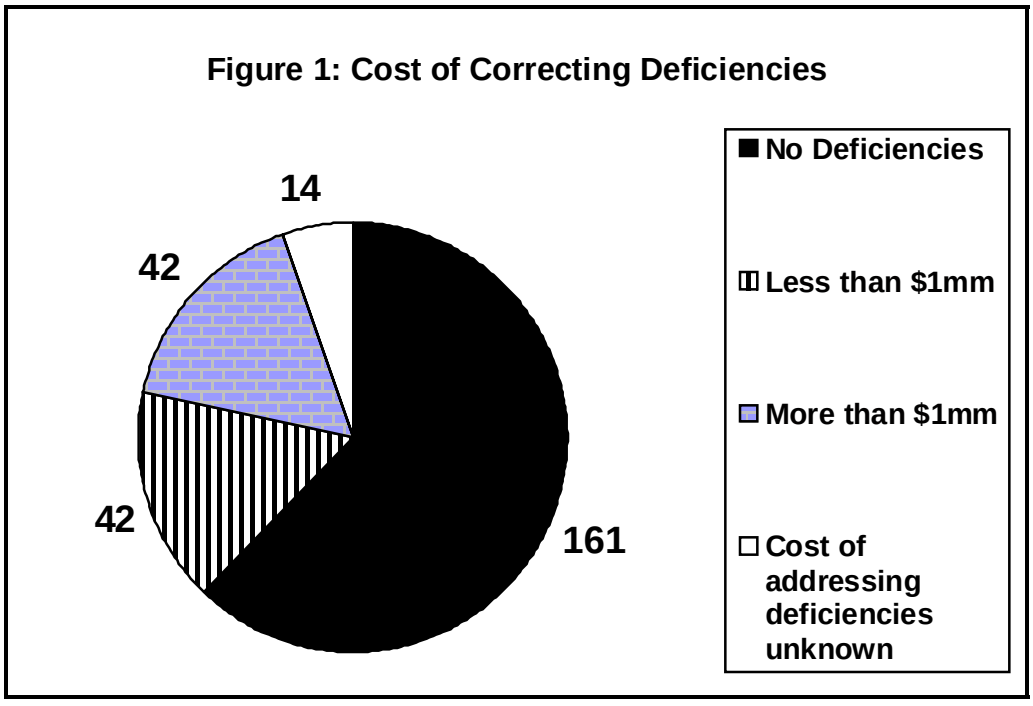
The average hospital in our survey was constructed in 1961. While some hospitals were constructed as early as 1902 and some as late as 2001, 61 percent of responding hospitals were built in the 1950s and 1960s. For 42 percent of the hospitals, the primary source of funding for the hospital's original construction was a Hill-Burton grant. Bonds issued by the county or city were the primary source of funding in 22 percent of the cases, while 13 percent of hospitals relied on community donations. Other primary sources of funding included hospital bonds that were guaranteed by HUD/FHA or the USDA (3 percent of hospitals), bonds without a guarantee (2 percent), bank loans (2 percent), and equity financing from investors (1 percent).

Eighty-eight percent of the hospitals reported a renovation or significant equipment purchase during the past five years. The median cost of these projects was $655,000. On average, approximately 45 percent of the cost was funded with debt, hospital reserves covered 30 percent of the costs, and charitable contributions funded approximately 10 percent of the

cost. In addition to using debt, reserves, and charitable contributions, projects were funded with lease arrangements and grants.

Current Needs

Correcting Deficiencies. As is shown in Figure 1, **38 percent of respondents (98 of 259) stated that they were aware of deficiencies** within their hospital "that, by law, require renovation or remodeling" (Question 8). Respondents reported deficiencies in areas such as sprinkler systems, roofs, Americans with Disabilities Act (ADA) compliance, compliance with the Health Insurance Portability and Accountability Act (HIPAA) privacy regulations, as well as heating, ventilation and air-conditioning systems. Of the 98 hospitals citing deficiencies, 84 provided estimates of the cost of bringing their facility "into complete compliance with local building and hospital codes" (Question10). The **median cost for these 84 facilities was $1 million** and the mean cost was $2.3 million, with a range of $9,600 to $11 million.



Other Capital Needs. Survey respondents' priorities for capital improvements stretch beyond compliance with local laws and regulations. When asked to categorize the highest priorities for their hospital (Question 12), 46 percent placed a high priority on new radiology equipment, 34 percent on a new information system, 24 percent on a new roof, and 16 percent on a new sprinkler system. In addition, 51 percent said major renovation or addition was a high priority, 28 percent needed to replace a major piece of mechanical equipment such as a boiler, and 17 percent said they needed a whole new building. To evaluate how long these needs have gone unmet, we asked respondents to state how long their three most pressing needs have been a concern. On average, the hospital's most pressing need has existed for five years, with a range of one to 28 years. The median cost of fully updating the facility to the degree that the respondents felt is "necessary to adequately serve" their community was $3 million with a range of $100,000 to $30 million.

Sources of Capital

The United States Department of Agriculture (USDA) has created programs to help public facilities in rural areas obtain loans or loan guarantees. In addition, the Federal Housing Administration (FHA) has a loan guarantee program known as the HUD 242 program that guarantees hospital debt. Of the 269 respondents to Question 14, 106 (39 percent) were familiar with the HUD program and 113 (42 percent) were familiar with the USDA program. While familiarity with these programs could be improved, it is not clear that an information campaign would help hospitals obtain needed capital since both programs require hospitals to meet certain profitability thresholds. Of the respondents that were not familiar with the HUD/FHA program, 65 percent had negative operating margins and would probably not qualify for the program even if they had known about the program. We do not have sufficient data to determine if the

remaining 56 hospitals would meet the other criteria of the HUD 242 loan guarantee. Overall, 21 percent of respondents knew about the HUD or USDA programs and felt that one of the programs met their hospital's needs.

Respondents were asked to list their top choices for obtaining capital (Question 15). Of the 251 respondents to this question, 41 percent said bonds issued by the county or city would be their first choice. Twenty-five percent would first pursue loans guaranteed by HUD/FHA or the USDA. While this question asks hospitals where they would attempt to find financing, it does not tell us if they actually have access to financing from these sources.

Costs and Availability of Capital

To gain insights into hospitals' current access to capital, we asked respondents to estimate their hospital's cost of capital for a $1 million dollar loan. One potential response to this question is for the respondent to indicate that their hospital could not qualify for a million dollar loan. Of the 221 respondents to this question, 178 (81 percent) provided a cost of capital, while 43 hospitals stated they could not qualify for a $1 million dollar loan. Nearly all (95%) of the 178 hospitals that were able to estimate their cost of capital felt that this cost would be 8 percent or less. Among the 178 respondents that provided a cost of capital, 169 could be linked to cost report information. Among the 169 hospitals, 61 generated operating profits and 108 generated operating losses. The hospitals with operating losses can have access to loans when their county or city is willing to issue and/or guarantee the bonds. Due to negative operating margins, these hospitals may require tax district, county, or private donor support to make the debt service payments.

To investigate historical difficulty obtaining loans, Question 17 asked respondents if their hospital had not been able to complete a project in the past few years due to being denied a

loan. Thirty of 266 responding hospitals indicated that this had been the case. Of these thirty hospitals, almost all indicated that their poor financial condition had prevented them from qualifying.

To further investigate the relationship between financial condition of hospitals and their access to capital, we then examined the financial condition of the hospitals that stated they could not qualify for a $1 million loan. Forty-two of the 43 hospitals in this situation could be linked with financial information from Medicare cost reports. We found that 40 of the 42 hospitals had generated negative operating margins during the 1996 to1998 period. Not only would these hospitals be unable to qualify for most private loans, they would probably also fail to qualify for the HUD 242 loan guarantee program.[1]

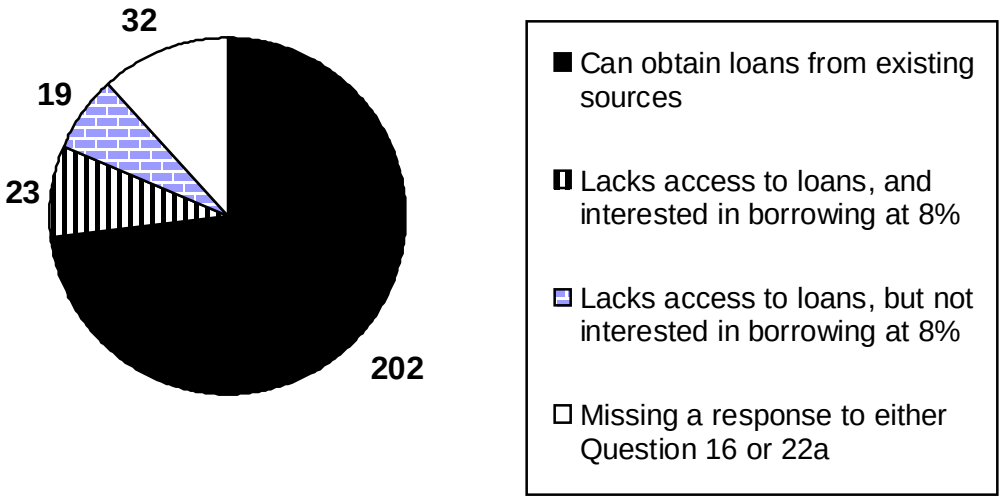
Demand for a New Federal Loan Program

Respondents were asked whether they would be interested in a hypothetical Federal loan program that would lend hospitals funds at an 8 percent interest rate (Question 22a). While 44 percent of 255 respondents stated they would apply for this type of loan, many hospitals qualified their response by stating they would apply only if the cost of funds were lower than they could obtain from other existing sources. Among the 43 hospitals that indicated in Question 16 that they could not obtain a $1 million loan through existing lenders (see above), 23 stated in Question 22a that they *would* apply for a government loan that charged an 8 percent interest rate. However, in Question 22b, these hospitals often qualified their answer by expressing preferences for much lower interest rates and doubts about their ability to repay the

[1] To qualify for the HUD 242 loan program a hospital needs to show a history of operating profitability. The exception to this rule is that a hospital that converts to Critical Access Hospital status can qualify if, on a pro-forma basis, the hospital can show that it would have generated operating profits if it had historically received cost-based reimbursement from Medicare.

loan. Nineteen respondents would *not* borrow from the government at 8 percent, even though they could not qualify for a $1 million dollar loan from other sources. When asked why they would not want to take the government loan, most stated that their hospital could not take on any additional debt service payments. One of the 43 respondents to question 16 did not respond to question 22a.

Figure 2: Potential Demand for a New Loan Program



Twenty-three hospitals indicated they currently could not qualify for a $1 million dollar loan and would be interested in a new Federal loan program. Twenty-two of the twenty-three hospitals had negative operating margins during the 1996 to 1998 period, and 17 of the 23 reported losses after including the benefits of government support and charitable donations.

In Appendix D we list comments of survey respondents who stated they could not qualify for a loan and would not be interested in a new Federal loan program (Question 22b). The responses from administrators who lack access to capital mirror the analysis of these hospitals' financial statements. In general, many respondents indicate that they would have

difficulty coming up with loan application fees and/or paying back loans even if they could qualify.

The Importance of Patient Volume

Hospitals' difficulty obtaining loans and making loan payments appears to be closely tied to patient volume. Table 1 shows that financial losses and access to capital difficulties tend to be concentrated among the smallest rural hospitals. While 33% of hospitals with under 500 admissions reported that they could not qualify for a $1million loan, only 5% of the 73 hospitals with over 1000 admissions reported that they could not qualify for a $1 million dollar loan. The differences in hospitals ability to qualify for loans mirrors differences in hospitals' net profit margins.

Table 1: Capital Needs and Patient Volume At Rural Hospitals with Under 50 Beds

Number of Admissions	**0-499 n=90**	**500-999 n=99**	**1000-1,999 n=59**	**2,000+ n=14**
Mean revenue in 1998	$4 million	$7 million	$12 million	$20 million
Percent of hospitals with positive operating income 1996-1998	10%	33%	44%	71%
Mean net margin 1996-1998	0.3%	2.7%	4.3%	6.5%
Percentage that could obtain a $1mm loan	67%	80%	94%	100%
Average age[1] of plant and equipment	15.1 years	11.8 years	10.7 years	10.2 years
Percent of hospitals reporting deficiencies	41%	40%	32%	29%
Mean cost of correcting deficiencies	$1.4 million	$2.1 million	$2.5 million	$4.6 million

[1]Estimated Age= 1998 depreciation / accumulated deprecation expense.
***Number of responding hospitals that could be matched with cost report data.**
****Percentages are calculated as a percentage of yes and no responses ignoring "don't know" responses.**

The importance of preserving hospitals that lack access to capital may hinge at least in part, on whether there are other alternative sources of care in the area especially for emergency care. The 42 hospitals in our sample that lack access to loans are, on average, located over 19 miles by road from the nearest hospital. All hospitals are at least ten miles from the next closest hospital. Eleven of the 42 hospitals are between ten and fifteen miles. Four hospitals are over thirty miles from the next hospital, with the most isolated hospital being fifty miles from the next hospital.

Characteristics of Hospitals that Lack Access to Loans

In deliberations regarding whether and how to assist hospitals that currently lack access to loans, policy makers may wish to have a better understanding of how these hospitals differ from other rural facilities. In Table 2, the hospitals that stated they could **not** qualify for a $1 million loan were contrasted with hospitals that could obtain loans with an interest rate under 10% (survey Question 16).

The data in Table 2 suggest that hospitals that lack of access to loans tend to be smaller facilities (as measured by total revenue), have lower margins, and were more likely to have been turned down for a loan in the past. They tend to have a slightly larger percentage of Medicare patients and a slightly smaller percentage of Medicaid patients. Since a majority of these hospitals receive some type of cost-based reimbursement from Medicare and most have modest levels of Medicaid patients, we assume that the financial difficulties of these hospitals stem from losses on the privately insured or the uninsured. Further research would be needed to determine if the losses stem simply from uncompensated care, or if the volume of services at these hospitals is so low that they are even losing money on patients with private insurance.

Table 2: Characteristics of Hospitals with Different Levels of Access to Capital

	Lack Access to Loans[1] n=42*	Estimated a Cost of Capital under 10% n=176*
Physical Plant Characteristics		
Year built (mean)	1964	1960
Age of plant and equipment in years[2]	13.1	12.0
Percent reporting deficiencies (Q. 8)	45%	41%
Medicare Payment Status		
Critical Access Hospital	57%	31%
Sole Community Hospital	21%	31%
Medicare Dependent Hospital	5%	8%
All types of Medicare cost-based reimbursement	83%	69%
Financial Characteristics		
Mean revenue 1996-1998	$5 million	$8 million
Mean operating margin 1996-1998	-13.6%	-5.5%
Mean net margin 1996-1998	-1.2%	3.7%
Unable to complete a project due to loan denials (Question 17)	27%	11%
Medicare inpatient days/inpatient days	63%	59%
Medicaid inpatient days/inpatient days	7%	9%
Median hospital district and local gov. support as a percentage of revenue	3.7%	0.5%

[1]Stated in question 16 that their hospital could not qualify for a $1 million loan.
[2]Estimated Age= 1998 depreciation / accumulated deprecation expense.
***Numbers that could be linked with external data.**

DISCUSSION OF POLICY OPTIONS

The social value of providing new (possibly Federally subsidized) sources of capital for small rural hospitals depends on the degree to which the new sources of capital fill unmet needs as opposed to acting as a substitute for existing sources of capital. New programs will have the largest impact if they primarily serve hospitals that currently lack access to capital rather than simply provide a lower-cost source of capital for hospitals that can already raise funds through existing private and public avenues. The hospitals in this survey that stated they could not

currently qualify for loans are primarily very small, low-volume hospitals that have generated operating losses in recent years.

The survey results suggest that 38 percent of rural hospitals need to make significant capital improvements to come into compliance with local building and hospital codes. The single-state study of Minnesota hospitals found similar results, reporting that 40 percent of respondents said they were not in compliance with local codes. The cost of compliance is greater than the hospital's 1998 level of cash and investments for 55 percent of our responding hospitals with deficiencies. The cost of all desired capital improvements (Question 13) exceeds cash and investments for 80 percent of the responding hospitals. Most hospitals can borrow to meet these capital needs, but a significant minority of respondents stated that they could not qualify for loans.

A new Federal loan program would serve a hospital's unmet demand for capital only if the following three conditions were met:

Condition 1) The hospital has difficulty obtaining loans from other lenders
Condition 2) The hospital wants to obtain a loan, at the loan program's terms
Condition 3) The hospital could qualify for the loan program.

Appendix B illustrates that of the 211 respondents who answered Questions 16 and 22a, and had available cost report information, 42 (20 percent) believed their hospital could not qualify for a $1 million loan from existing sources. Among these 42 hospitals meeting condition 1, 19 hospitals were not interested in borrowing funds at an 8 percent interest rate, and thus fail Condition 2. Most of these respondents reported concerns about the ability to make additional debt service payments. The remaining 23 hospitals (11 percent of respondents with relevant data) had an unmet demand for loans that might be met by the hypothetical loan program. However, we should caution that even those expressing an interest in a new loan program were often concerned about their hospital's ability to meet larger debt service payments.

For a new Federal loan program to satisfy unmet demand, the hospitals that lack access to other loans would not only have to find the program's terms acceptable, they would have to qualify for the new program. Among the 23 respondents that indicated an interest in the loan program, 22 generated operating losses during the 1996 to 1998 period. Even after factoring in charitable contributions and local government support, 17 of the 23 hospitals had a negative total margin in 1998.

Finally, we should ask whether new loans to these 23 facilities would decrease or increase their operating losses. If these 23 hospitals borrow funds to fix deficiencies at their facility, their operating losses may grow larger. This situation could occur because many capital improvements such as a new roof, new sprinklers, ADA and HIPAA compliance will increase interest expenses without generating new revenues for the hospital unless the hospital receives cost-based reimbursement. Because hospitals that lack access to loans have historically lost money on their operations and those losses could grow, they may be high-risk borrowers.

In summary, survey results suggest that there are significant capital needs for some small rural hospitals. Survey respondents identified deficiencies at their hospitals that in aggregate would cost approximately $200 million to correct. While most small rural hospitals indicate they could borrow funds at a reasonable interest rate, a significant minority lacks access to loans. Eleven percent of hospitals in the study indicate they have been turned down for a loan in the past few years. Being denied a loan prevented these hospitals from making capital improvements, including the purchase of basic diagnostic equipment such as CT scanners.

Hospitals that have trouble obtaining loans tend to provide a low volume of services and have trouble earning a profit. While a new loan program could provide a temporary fix for a few hospitals, it does not appear to be a long-term answer for most hospitals with capital

difficulties. Most hospitals that currently lack access to capital would have great difficulty absorbing additional debt service payments even if they could qualify for a new loan program.

Improving access to capital is dependent on improving hospitals' profitability. However, Congress may be reluctant to provide additional Medicare reimbursement for these facilities. Eighty-three percent of hospitals in our survey that lacked access to private loans are already receiving a form of cost-based reimbursement from Medicare, either as Critical Access Hospitals (57 percent), Sole Community Hospitals (21 percent), or Medicare Dependent Hospitals (5 percent). While Medicare is paying these hospitals based on their costs, this special reimbursement is not helping these hospitals fund the cost of non-Medicare uncompensated care. Hospitals receiving cost-based Medicare payments can still have negative overall profit margins if their revenue from privately insured patients (and other sources) is not sufficient to cover their bad debts from uninsured and underinsured patients.

Policy makers have at least three policy options for assisting hospitals that suffer losses and lack access to capital due to the financial burden of uncompensated care. First, Medicare policy could provide hospitals in regions with very few potential patients a low-volume adjustment that would allow low-volume hospitals to earn a profit on Medicare patients (not just recover costs). Medicare profits could help cover the cost of uncompensated care provided to non-Medicare patients and build reserves for capital improvements. Second, Medicare policy could be adjusted to allow Medicare to directly pay a portion of hospitals' charity care and bad debt burdens. Federal assistance with uncompensated care burdens could be justified if policy makers conclude that uncompensated care is partially a Federal responsibility as opposed to being a burden that must be borne entirely by local tax payers, local donors, and the privately insured.

Third, policy makers could set up a technical assistance program operated at the state level to assist rural hospitals in improving their financial condition. The technical assistance officers could work with hospitals and lenders such as the USDA. The lenders could provide benchmarks that the hospitals must reach to qualify for loans or loan guarantees. The hospitals would have a financial incentive to work with consultants to reach these benchmarks even if improved financial performance requires tough decisions such as reducing staffing or services.

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APPENDIX A – RURAL HOSPITAL CAPITAL NEEDS SURVEY

PRIOR CAPITAL INVESTMENTS

1. In what year was your hospital built? 10 _____

2. What was the primary source of financing for the original facility? [Check one only]

20 ❑ 1 A Hill-Burton grant

❑ 2 Bonds issued or guaranteed by the county or city

❑ 3 Loans guaranteed by HUD/FHA or the USDA

❑ 4 Bonds issued by the hospital that were not guaranteed

❑ 5 Bank loans that are not guaranteed by any governmental agency

❑ 6 Community donations

❑ 7 Equity financing from investors

❑ Other (specify) _____

_____

❑ 9 Don't know

3. What is the largest capital improvement project that your hospital has undertaken since January 1, 1997? (Capital improvements include new construction, remodeling, and the purchase of equipment for use in the hospital or in a hospital subsidiary.) 30

_____

4. In what year was this capital improvement project completed?

40 ❑ 1 1997 ❑ 2 1998 ❑ 3 1999 ❑ 4 2000 ❑ 5 2001 ❑ 6 Still in progress

5. What was the approximate cost of this project? 50 $ _____

6. How was this project funded (e.g., 50% debt and 50% reserves)?

60 _____% Hospital debt

61 _____% Charitable or local government contributions

62 _____% The hospital's financial reserves

63 _____% Other (specify) _____

100% Total

7. Is the hospital still servicing debt from this project? 70 ❑ 1 Yes ❑ 2 No ❑ 3 Don't know

CAPITAL NEEDS

8. Are you aware of any deficiencies within your hospital that, by law, require renovation or remodeling? These deficiencies would include situations where the hospital is not currently in compliance with local fire codes or requirements of the state's hospital inspection agency.

80 ❑ 1 Yes ❑ 2 No → Go to question 11 ❑ 3 Don't know → Go to question 11

9. Please list the three most expensive deficiencies within your hospital and the approximate cost of correcting each deficiency.

a. 1st deficiency: 90 _____ → d. Cost: 93 $ _____ ❑ Don't know

b. 2nd deficiency: 91 _____ → e. Cost: 94 $ _____ ❑ Don't know

c. 3rd deficiency: 92 _____ → f. Cost: 95 $ _____ ❑ Don't know

10. What is the approximate total cost of bringing your facility into complete compliance with local building and hospital codes? 100 $

_____

11. For each of the following types of improvements, please indicate the item's priority to your hospital and the approximate cost of making the improvement, if known.

Type of Improvement	Priority for making this improvement is:	Approximate Cost of Improvement
a. Build a completely new facility 110	☐ 1 High ☐ 2 Medium ☐ 3 Low ☐ 4 None	$_____ ☐ Don't Know 125
b. Build or renovate a birthing center 111	☐ 1 High ☐ 2 Medium ☐ 3 Low ☐ 4 None	$_____ ☐ Don't Know 126
c. Build or renovate a therapy center 112	☐ 1 High ☐ 2 Medium ☐ 3 Low ☐ 4 None	$_____ ☐ Don't Know 127
d. Other major renovation or addition: _____ 113	☐ 1 High ☐ 2 Medium ☐ 3 Low ☐ 4 None	$_____ ☐ Don't Know 128
e. New sprinkler system 114	☐ 1 High ☐ 2 Medium ☐ 3 Low ☐ 4 None	$_____ ☐ Don't Know 129
f. Major mechanical (boiler, elevator, generator, etc.) 115	☐ 1 High ☐ 2 Medium ☐ 3 Low ☐ 4 None	$_____ ☐ Don't Know 130
g. New roof 116	☐ 1 High ☐ 2 Medium ☐ 3 Low ☐ 4 None	$_____ ☐ Don't Know 131
h. Remove hazardous materials (e.g., asbestos) 117	☐ 1 High ☐ 2 Medium ☐ 3 Low ☐ 4 None	$_____ ☐ Don't Know 132
i. Install handicapped access 118	☐ 1 High ☐ 2 Medium ☐ 3 Low ☐ 4 None	$_____ ☐ Don't Know 133
j. New wiring/plumbing 119	☐ 1 High ☐ 2 Medium ☐ 3 Low ☐ 4 None	$_____ ☐ Don't Know 134
k. New information system 120	☐ 1 High ☐ 2 Medium ☐ 3 Low ☐ 4 None	$_____ ☐ Don't Know 135
l. New lab equipment 121	☐ 1 High ☐ 2 Medium ☐ 3 Low ☐ 4 None	$_____ ☐ Don't Know 136
m. New radiology equipment 122	☐ 1 High ☐ 2 Medium ☐ 3 Low ☐ 4 None	$_____ ☐ Don't Know 137
n. Other:_____ 123	☐ 1 High ☐ 2 Medium ☐ 3 Low ☐ 4 None	$_____ ☐ Don't Know 138
o. Other:_____ 124	☐ 1 High ☐ 2 Medium ☐ 3 Low ☐ 4 None	$_____ ☐ Don't Know 139

12. Of the investments listed above, please list the letters corresponding to the ***three most pressing*** needs.

140 1st _____ → How many years has this been a pressing need? 143 _____

141 2nd _____ → How many years has this been a pressing need? 144 _____

142 3rd _____ → How many years has this been a pressing need? 145 _____

13. What would be the approximate total cost of fully updating your facility to the degree that you believe is necessary to adequately serve your community? 146 $ _____

SOURCES OF CAPITAL

14. For each of the federal programs shown below, please indicate whether you are familiar with the program and if the program fits the capital needs of your hospital.

Type of Federal Program	Are you familiar with the program?	If you are familiar with the program, does it fit the capital needs of your hospital?
a. FHA/HUD 242 loan program	❑ 1 Yes ❑ 2 No 147	❑ 1 Yes ❑ 2 No ❑ 3 Don't know 150
b. USDA community facilities loan and loan guarantee program	❑ 1 Yes ❑ 2 No 148	❑ 1 Yes ❑ 2 No ❑ 3 Don't know 151
c. Small Business Administration loan guarantee program	❑ 1 Yes ❑ 2 No 149	❑ 1 Yes ❑ 2 No ❑ 3 Don't know 152

15. If you wanted to undertake a capital investment that could not be wholly financed by your hospital's internal reserves and project-specific charitable contributions, in what ranked order would you approach the following sources of capital:
(1 = first source to be approached, 2 = second source, etc.)

_____ 153 Bonds issued or guaranteed by the county or city

_____ 154 Loans guaranteed by HUD/FHA or the USDA

_____ 155 Bonds issued by the hospital that were not guaranteed

_____ 156 Bank loans that are not guaranteed by any governmental agency

_____ 157 Equity financing from investors

_____ 158 Other (specify) _____

16. If your hospital had to borrow $1 million dollars for capital improvements, what would be your approximate cost of capital? We define "cost of capital" as the interest rate on the loan plus any annual premium for loan guarantees.

(Please check one only.)

160

❑ 1 0 – 5%
❑ 2 6%
❑ 3 7%
❑ 4 8%
❑ 5 9%
❑ 6 10% or more
❑ 7 Our hospital could not qualify for a million dollar loan
❑ 8 Don't know

17. Since January 1, 1997, have there been any projects for which you attempted to obtain funding, but could not complete due to an inability to secure loans?
170
❑ 1 Yes ❑ 2 No → Go to question 22 ❑ 3 Don't know → Go to question 22

18. What type of project were you planning to do? 180 _____

_____

19. What was the projected cost of this project? $ 190 _____

20. Who did you approach for a loan? (List all) 200 _____

_____

21. Why was the loan denied? 210_____

_____

22. Assume there was a government loan program that would lend your hospital between $500,000 to $20,000,000 for 20 years at an 8% fixed interest rate. Your hospital would incur $10,000 in application costs and the application would take approximately six months to process from initial application to closing on the loan. Would your hospital apply to this type of loan program?
220

a. ❑ 1 Yes ❑ 2 No

b. Why or why not? 221 _____

_____

_____

c. If your hospital would apply for this type of loan, how large of a loan would it apply for? 222 $ _____

GENERAL INFORMATION

23. What is your position at the hospital? [Check one only]

230 ❑ 1 Administrator/CEO

❑ 2 Chief Financial Officer

❑ Other (please specify) _____

24. Is your hospital a Critical Access Hospital? 240 ❑ 1 Yes ❑ 2 No → Go to question 26

25. In what year did your hospital convert? 250 _____

26. What type of entity owns your hospital?

260 ❑ 1 County

❑ 2 City

❑ 3 Hospital district

❑ 4 Local non-profit organization

❑ 5 Non-profit hospital system that also owns other hospitals

❑ 6 For-profit corporation

❑ Other (please specify) _____

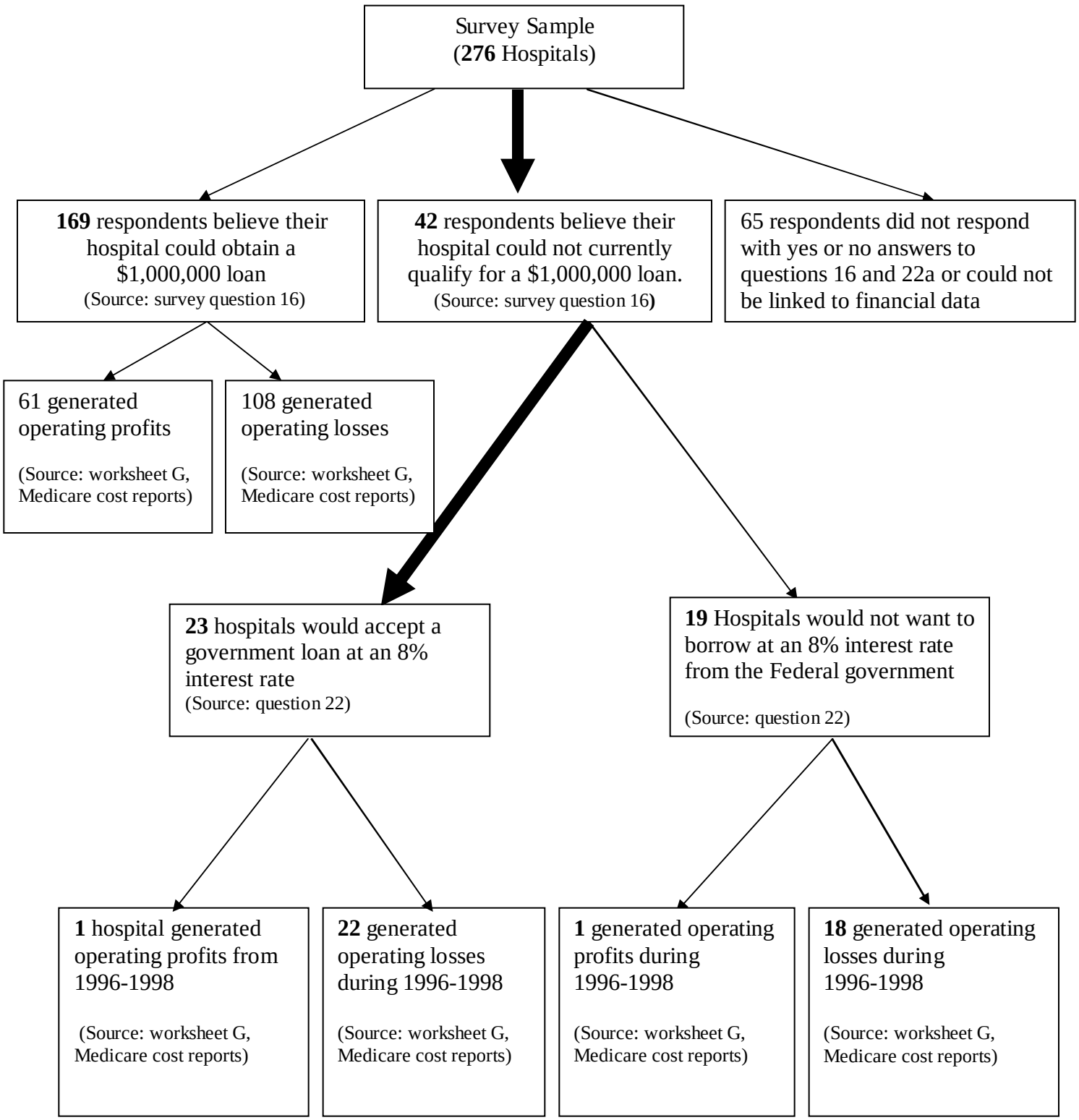
27. How much money does your hospital receive per year in contributions or tax revenue from the city, county and/or hospital district? 270 $_____

Thank you for taking the time to complete this questionnaire.

Please return by October 15, 2001 in the postage-paid envelope enclosed to:

Hollander Cohen & McBride, 22 West Road, Suite 301, Towson, MD 21204

APPENDIX B – Who would gain access to capital via a new Federal loan program?



APPENDIX C – A Comparison of Survey Respondents and Non-Respondents

The purpose of this appendix is to discuss the potential for the survey results to be biased due to responders being systematically different from non-responders. This is an important concern in any study where a significant portion of the sample does not respond to the survey. Our primary concern is that hospitals may have been more motivated to respond if they had larger capital needs, or greater difficulty meeting their needs. This type of bias, if it exists, would cause us to overstate capital needs and the difficulty of obtaining financing.

We conducted several analyses to assess the extent of any non-response bias. First, we compared financial and other data from respondents' and non-respondents' cost reports. In general, we find that the characteristics of responders are very similar to non-responders. As is shown in Table C-1, the respondents have buildings and equipment with a similar average age to the non-respondents, suggesting the two groups of hospitals have similar needs to repair or replace buildings and equipment. While responding hospitals tend to be slightly smaller, slightly more profitable, and have slightly more debt than the non-respondents, the differences between the two groups appear to be small in magnitude. The respondents' mean characteristics shown in Table C-1 are all within one-third of a standard deviation from the non-respondents' mean statistics.

TABLE C–1: Comparison of Survey Respondents and Non-Respondents

Hospital Characteristics 1996-1998 Mean Values	Respondents N=259[2]	Non-Respondents N=649[2]	T- Statistic
For-profit hospital	4%	7%	2.19*
Revenue (in millions)	$7.2 (4.6)	$8.8 (12.2)	2.77**
Operating margin	-7.5% (13%)	-8.5% (13%)	1.00
Net profit margin	2.3% (7.6%)	1.0% (7.4%)	2.42*
Debt-to-revenue ratio	.36 (.29)	.31 (.30)	2.10*
Average age[1] of property, plant and equipment (in years)	12.69 (6.2)	11.82 (6.3)	1.88

[1]Age is calculated by dividing accumulated depreciation by depreciation during the year.
[2] 259 of 276 respondents and 649 of 674 non-respondents could be linked to cost-report data.
( ) standard deviations are in parentheses
* Significant at the p=.05 level ** significant at the p=.01 level

In our study, we found that patient volume had a significant impact on hospitals' profitability, access to capital, and odds of reporting deficiencies. Therefore, in Table C-2 we further disaggregate the respondent/non-respondent comparisons by the number of admissions in 1998. The key message in Table C-2 is that the differences between sizes of hospitals appear much greater than the differences between respondents and non-respondents.

TABLE C–2: Comparisons of Survey Respondents and Non-Respondents by Hospital Volume

Hospital Characteristics 1996-1998 Mean Values	Respondents N=259* By Admissions Level				Non-Respondents N=649* By Admissions Level			
	<500 n=88	500-999 n=98	1,000-1,999 n=59	2,000+ n=14	<500 n=229	500-999 n=196	1,000-1,999 n=176	2,000+ n=48
For-profit hospital	0%	6%	7%	0%	3%	9%	10%	8%
Revenue (in millions)	4	7	12	20	4	7	13	23
Operating margin	-16%	-5%	-1%	1%	-16%	-8%	-2%	1%
Net profit margin	0%	3%	4%	7%	-1%	1%	3%	6%
Debt to revenue ratio	.35	.27	.31	.31	.30	.35	.42	.41
Average age[1] of plant and equipment in years	15.1	11.9	10.7	10.2	13.8	11.3	10.3	9.2

[1] Age is calculated by dividing accumulated depreciation by deprecation during the year.

* Of the 276 respondents 259 could be linked to cost report data. Of non-respondents, 649 of 674 could be linked to cost report information.

In addition to comparing respondents and non-respondents using secondary data, we selected a 5-percent random sample of non-respondents for a follow up telephone interview designed to collect a limited number of variables with which to assess bias. These data items dealt with the hospital's capital needs (Question 8 and Question 10) and access to capital (Question 16 and Question 17). As with the mail survey, we targeted CFOs and CEOs as respondents. Among the 34 hospitals randomly selected for telephone contact, 15 CEOs, 13 CFOs, and one Chief Operating Officer agreed to answer the four key questions. These 29 responses represent an 85 percent response rate.

Respondents' access to capital appears similar to non-respondents

When we asked our sample to comment on their cost of capital and ability to obtain a $1 million loan, 19 of 29 respondents were able to provide an answer to the question. Two of these respondents (11 percent) stated their hospital could not obtain a million dollar loan. This figure compares to 20 percent estimate derived from our mail survey. Twenty-eight of the twenty-nine telephone respondents were able to comment on whether they had been denied a loan. Five respondents (18 percent) stated that they had been denied a loan during the past four years and therefore were not able to complete a project. This compares to the 11 percent of mail survey respondents who stated they could not complete a project due to being denied a loan. Given that the follow-up calls found a slightly higher percentage of hospitals that had previously been denied a loan and a slightly lower percentage that said they could not currently qualify for a loan, the follow-up survey results suggests that respondents' access to capital is not significantly and systematically different from non-respondents' access to capital.

Respondents may have higher capital needs than non-respondents

With respect to capital need, 38 percent of the mail survey respondents stated that their hospital had deficiencies that, "by law, require renovation or remodeling." In our telephone follow-up, only 6 hospitals (21 percent) stated that their hospital had deficiencies. However, three other facilities noted that their hospitals were not in compliance with all building codes and that bringing their facilities up to code would cost millions of dollars. These three hospitals did not "by law" have to correct their deficiencies however, because older hospitals had been "grandfathered" exemptions to current codes. Hence, 31 percent of respondents noted that they were not up to code, but only 21 percent of telephone respondents had deficiencies that "by law" had to be corrected. One possible explanation for the lower rate of deficiencies among telephone

follow-up respondents is that hospitals with deficiencies were more likely to answer the mail survey than those without deficiencies. Based on a comparison of mail survey data and data from the follow-up sample, a chi-square test estimates that there is a 93 percent chance that mail survey respondents were at least slightly more likely to have deficiencies than those who did not respond to the mail survey. However, this chi-square result assumes that respondents will answer a mail survey the same way as they would a telephone survey. A second possible explanation is that respondents are more reluctant to admit deficiencies when being surveyed over the telephone – a survey modality bias. A third possibility is that mail respondents may have cited their deficiencies even if they had been "grandfathered" exceptions to current building codes.

It is very difficult to evaluate the potential for bias in the average cost of correcting deficiencies because a few hospitals in our mail survey sample stated that they need several million dollars to be brought up to code. These outliers can have a significant impact on the overall mean. Due to the influence of outliers, our survey found that the mean cost of correcting deficiencies was $2.3 million while the median was only $1 million. In the telephone follow-up, the mean reported cost of correcting deficiencies among the six that "by law" had to correct their deficiencies was $391,500, and the median was $65,000. These estimates suggest that mail survey responders may have higher costs of correcting deficiencies than non-respondents. However, we must caution that the sample size on the telephone survey is small; one or two outliers could have a significant impact on the results. For example, if we had included the grandfathered hospitals as having deficiencies, the mean cost of correcting deficiencies would have been over $1 million. Due to the potential influence of a few outliers and uncertainty about the degree of any non -response bias, the mail survey results should not be used to estimate the average cost of correcting deficiencies for non-respondents.

Appendix D –

Comments of Respondents Who Report a Lack of Access to Capital, But Are NOT Interested in the Hypothetical Federal Loan Program (Question 22b).

1) "Not at the moment – not able to make debt service payments."

2) "Could not repay."

3) "We don't have the $10,000" for the application fee.

4) "The district's revenue from operations is not enough to service any debt other than operating expenses"

5) "The cost is too much to pay back."

6) "There is no way we could project ..ability to pay that loan off – the only loan that makes sense would be a new hospital – anything else is good money after bad."

7) "Too large of a loan."

8) "No money to do it – no 'profit' to pay loan back."

9) "Could not repay it. No dollars for application fees."

10) "$10,000 application fee is not feasible."

11) "Not sure how we would pay it back."

12) "Not immediately. We need to retire debt at the present time. The fixed interest rate seems high. We might possibly consider a loan after year 2005."

13) The community has an "aversion to a rise in borrowing."

14) "We do not have the ability to repay a loan at this time."