University of Michigan Hospitals
Department of Medical Information

Record Completion Final Report
April 26, 1989
Management Systems Department

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Executive Summary

The Joint Commission on the accreditation of Healthcare Organizations (JCAHO) requires that at least 50% of the case summaries be completed within fifteen days of the patient discharge date. The University of Michigan Hospitals (UMH) has a goal of completing case summaries within ten days of patient discharge. Data collected in December, 1988 showed that 36% of the case summaries met the UMH goal and 64% met the JCAHO standard. The Medical Information Department (MID) requested that an investigation be made into ways to significantly reduce the number of incomplete case summaries.

The case summaries are needed to meet JCAHO requirements, for continuity of patient care, and for hospital reimbursement. The process for completing case summaries falls into four parts: DICTATION - house officer dictates the case summary when the patient leaves; TRANSCRIPTION - case summary is typed; SIGNATURE - the attending physician signs the case summary; COMPLETION - the case summary is attached to the patient record. When these three aspects are done, the case summary is completed.

To learn the system, the project team tracked records, toured the record completion system, and developed a flow chart encompassing the whole case summary process. Having gained a general understanding of the system, data was collected to see where the problem area was in the completion process. Data showed that the dictation segment was the leading cause of case summaries not being completed in time, with the signature segment also having a major detrimental impact. With the problem determined, interviews were held with staff at the UMH and Ingham Medical (Lansing, MI) for a better understanding of how each segment works and how all three interact. These interviews led to the development of a survey for house officers to see what problems they have and how the process can be made to facilitate the dictation process.

The surveys found that there is some dissatisfaction with the current system. Most doctors felt that a bonus system would motivate them to complete case summaries in a more timely manner. Along with such a system, they indicated that making patient records more readily available would help the dictation process.

Seeing that a bonus system would be helpful, the project team developed a five point plan to improve the case summary completion process. The plan is centered around the bonus/incentive system, but the five parts can be implemented independently.
Introduction

This project investigates the current system for case summary completion at the University of Michigan Hospitals (UMH). Case summaries are a brief overview of a patient's stay at the hospital, including day of admission and discharge, diagnosis, procedures performed, and further care recommended. They are needed for continuity of patient care, to meet regulatory requirements, for medical legal situations, and for reimbursement of services provided.

The three main steps in completing a case summary are dictation, transcription, and signing. After a patient is discharged, the House Officer or attending physician dictates the case summary. Inter-Hospital phones are available on patient care floors for this duty. The UMH goal dictates that the dictation will be completed within one day of discharge. The dictated summary is then typed by the Medical Word Processing Center (MWPC), which has a standard of three days to complete this task. The case summary and referring physician copies are delivered to the attending physician who
is to sign the case summary within six days. The case summary is filed on the patient record and the record is considered 'complete' if there are no other outstanding deficiencies.

Requirements set by the Joint Commission on the Accreditation of Healthcare Organizations (JCAHO) require that no more than 50% of the average monthly discharges be incomplete fifteen days past discharge. An audit conducted in December, 1988 by the Medical Information Department revealed that of the completed case summaries, 64% of the case summaries were completed within the fifteen day standard. Since the UMH is so close to meeting the standard, MID wished to investigate alternatives to significantly reduce the number of incomplete records. The project team investigated the case summary process to see where improvements can be implemented and present their conclusions and recommendations in this report.

**Approach**

The approach undertaken by the project team was a methodical step by step process from the general workings of the system toward investigating specific segments and analyzing the process on a part by part basis.

**General Investigation** Using the UMED system, the records for 75 patients were tracked following discharge. This gave a view of how the system tracks records and where the records go after the patient is discharged. This was followed up by a tour of the record completion department with emphasis on the routing of case summaries. The tour led to the development of flow chart for case summary flow. The flow chart (Appendix) viewed the process as four distinct parts: dictation, transcription, signature and completion.

**Data Collection (1)** Having learned the system organization, the team analyzed data collected in December (1988) on the case summary turnaround time. The data for December (1988) had been collected just prior to Christmas. In addition, data was collected for one week, in which the sample was not large enough to properly represent the current situation. On two more occasions, data was collected (March-1989 and April-1989, two weeks each time) to see if the values for
turnaround time for December were accurate and if the turnaround time was constant during the investigation. This data collection involved going through the signed case summaries received at MRDQ each day and recording:

1) The time from patient discharge until dictation (for dictation time).
2) The time from dictation until transcription completed (for transcription time).
3) The time from transcription completion to receiving the signed case summary (for signature time).

Data Collection (2) Another approach was taken to view the percent of case summaries being completed within 10 days post discharge. This would give insight into the percentage breakdown of how many current records are being complete within the UMH recommended 10 day turnaround, whereas the other set of data collection included backlog of case summaries. This data differs from the data collected above, in that it views the daily discharges and their respective case summary status. The results after reviewing 1194 discharges were:

1) Complete Case Summary - 53.5%
2) Attending not signing case summary - 16.3%
3) Not Dictated - 16.8%
4) Other - 13.3%

Interviews Once the case summary process and turnaround time situation were defined, the project team needed to talk with people who had a first hand understanding of the system. The goal was to see what their views were on how to improve the system.

a) The first interview was with the Director of Medical Information at Ingham Medical located in Lansing, Michigan. This hospital was chosen since it is a teaching hospital (like the UMH), so their process is likely to be similar to that found at UMH. The purpose of visiting another hospital was to see what problems they encounter and how they deal with them. Their problem solving approaches were analyzed to see what can be applied to the situation at the UMH.

The next interviews were conducted to meet with a member from each of the three parts of the case summary process to get their views and insight.
b) The second interview was with Josephine Molle, Director of MWPC (Transcription Department). From the data collection, the project team had found that her department consistently did well in meeting the goal of completing transcription within three days of dictation. The reason to meet with Ms. Molle was to learn why her department did well and see how the process could be improved by using ideas implemented in her department.

c) The next interview was with a house officer. Questions were developed beforehand to get his view of the dictation process and any problems he encountered.

d) The final interview was with an attending physician from Otolaryngology. The team asked for his views on the signature aspect of the case summary process as well as the dictation process.

**Survey**  From the interviews with the house officer and attending physician, a survey was developed (see Appendix). 600 were distributed to the house officers. The purpose of the survey was to get the views of many house officers on what problems they encounter and how the process can be made easier for dictating case summaries. The questions involved a numerical rating system for quantitative analysis and some open ended questions to gain more insight into what the doctors felt was needed.

**Incentive/Bonus System** Research was performed on different incentive and bonus systems that could be implemented to improve the dictation and signature parts of the case summary completion process. The results from the survey were used to see which system would be most effective and best received by the house officers and attending physicians.

**Current Situation**

Currently, the hospital is meeting the JCAHO standard of having 50% of the case summaries completed within 15 days of discharge, by a small percentage. Data collected from April 4 through April 14 (1989) gave the following results:
Data Analysis of Record Completion
(for 895 case summaries)

**Dictation Values**
Mean = 14.4 days
55.1% of the case summaries were dictated within one day post discharge.
66.7% of the case summaries were dictated within three days post discharge.

**Transcription Values**
Mean = .98 days
83.1% of the case summaries were transcribed within one day of dictation.
99.4% of the case summaries were transcribed within three days of dictation.

**Signature Values**
Mean = 9.2 days
55.6% of the case summaries were signed within six days of transcription.
79.8% of the case summaries were signed within ten days of transcription.

**Total Values**
Mean = 24.6 days
51.1% of the case summaries were completed within ten days post discharge.
65.3% of the case summaries were completed within fifteen days post discharge.

Boldface Indicates the goal for the three parts set by UMH.

The table shows that the UMH meets the JCAHO standard, with 65.3% of the case summaries completed within fifteen days post discharge. The dictation and signature aspects of the process are the areas deficient in timely completion.

**Alternatives & Hypothesis**
Initially our emphasis was to develop an incentive system to motivate the house officers to dictate the case summaries on a more timely basis. Data collected showed that the problem also involved the attending physicians, so the approach was expanded to include their motivation into the investigation.

An alternative to the bonus system is to put more pressure on the house officers to dictate the case summaries, by placing restrictions on admitting and surgery privileges. In the past, this has met limited success. Although it seems inappropriate to provide an incentive to doctors to do a job they are expected to do, other attempts have not been successful.
Findings and Conclusions

The surveys became the project team's most important data collection aspect. Fifty one surveys were returned. The results were based on the most common response given (mode), since this would give a clearer indication of how the majority of the house officers felt. The questions and responses to some key questions are given below. (See Appendix for complete results)

<table>
<thead>
<tr>
<th>Question</th>
<th>Mode</th>
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<tr>
<td>I have to redictate case summaries.</td>
<td>2</td>
</tr>
<tr>
<td>I receive weekly reports indicating case summaries that need dictation.</td>
<td>1</td>
</tr>
<tr>
<td>Patient records are available when I need to dictate the case summary.</td>
<td>3</td>
</tr>
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</table>

The rating system: 1 = almost never through 5 = almost always.

These responses indicated that the dictation process was not flowing as smoothly as had been thought. Redictating case summaries causes delay in completion and leads to dissatisfaction with the system. Next, the house officers did not seem to be properly informed of their delinquent case summaries. Reports are sent to them weekly, but do not seem to be received by the house officers. The last question showed a lack of availability of the patient record without which a case summary cannot be done. Together, the responses show that what is believed to be occurring is not what the house officers believe is happening.

When asked 'I feel that if a bonus/incentive were offered to dictate case summaries, it would motivate the house officers to dictate case summaries on a more timely basis', the response was: Yes = 34  No = 16

This pointed out that there was relatively strong agreement by the respondents that an incentive would work. This indicated that implementation of an incentive system would have fairly broad appeal which would make it easier to implement. Had there been a more negative response, then it would be unwise to implement any bonus system.
Given a list of four reasons for dictating case summaries, they were asked to circle as many reasons as apply for why they dictate case summaries. The distribution was:

<table>
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<th>Reason</th>
<th>Response</th>
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<tbody>
<tr>
<td>Required by my clinical department</td>
<td>46</td>
</tr>
<tr>
<td>Continuity of patient care</td>
<td>26</td>
</tr>
<tr>
<td>Courtesy to referring physician</td>
<td>24</td>
</tr>
<tr>
<td>For financial reimbursement purposes</td>
<td>10</td>
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</tbody>
</table>

It became clear from these response that the house officers are not aware of the financial impact (or are unconcerned) of case summaries not being completed. This indicated the need for better education of the house officers, so that they would understand the case summary completion process and better appreciate its inner workings.

The survey ended with an open ended question asking the house officer to express how the dictation of case summaries can be made easier. The three most common responses were:

- MRDQ should have charts available for house officers
- Leave record on floor for more than one day
- Alert HO sooner about undictated case summaries.

Currently, the record is left on the floor for 48 hours post discharge. Either the doctors are not aware of this, or the record has been taken by some department (other than MRDQ) which limits the house officer's access to the record.

Recommendations
From the research accomplished, a five-point approach is recommended to improve the case summary completion process. Each part could be implemented separately, but maximum benefits will be realized if all the parts are enacted.
**Bonus Plan for House Officers**

There are 735 House Officers at the University of Michigan Hospitals. The motivational technique recommended for them involves a bi-monthly bonus based on their percentage completion of case summaries within the one day hospital goal during the prior two months. A three level plan is presented, showing percentage completion and amount of bonus.

<table>
<thead>
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<th>Percentage Completed</th>
<th>Bonus Amount</th>
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<tr>
<td>70%</td>
<td>$50</td>
</tr>
<tr>
<td>80%</td>
<td>$100</td>
</tr>
<tr>
<td>95%</td>
<td>$175</td>
</tr>
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</table>

Those below 70% will not receive any bonus. A bonus system using a financial incentive is recommended since House Officers' salaries are sufficiently low that this bonus would be a noticeable increase. The bonus levels are based on a percentage of monthly income for the house officers. The estimated cost for the bonus plan is $316,969 per year (See Appendix). Any case summaries not dictated from the previous two month period will be added to the total number of case summaries for the current two month period that the House Officer is responsible for. This stipulation makes it difficult for a HO to qualify for a bonus while having many overdue dictations.

**Incentive Plan for Attending Physicians**

There are 689 Attending Physicians at the UMH. The motivational technique for them also involves a three level plan based on percentage of case summaries signed within six days of reception during the prior two month period.

<table>
<thead>
<tr>
<th>Percentage Completed</th>
<th>Incentive</th>
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<tbody>
<tr>
<td>70%</td>
<td>5 Free Lunches at Cafeteria</td>
</tr>
<tr>
<td>85%</td>
<td>Dinner for two</td>
</tr>
<tr>
<td>Highest %</td>
<td>Receives Attending Physician of the Month Award for his/her department.</td>
</tr>
</tbody>
</table>
Doctor's earnings are too high for a financial incentive to be effective, thus an incentive plan involving free meals and a prestige award for the doctor in each department achieving the highest percentage of case summaries was chosen. Attending physicians who meet the 85% completion would also receive the five free lunches at the Hospital Cafeteria. The estimated cost per year of this plan is $132,231 (See Appendix). As with the house officers, those attending physicians not meeting the 70% standard would not receive a bonus.

One concern for this plan is that doctors do not have equal distribution of case summaries that they are required to dictate. Thus, if one doctor has ten case summaries per month and another has twenty, then the plan is not fair. Although this is a concrete problem, the project team believes that the distribution of case summaries that need dictating over time will even out. Another reason for this approach of using percentages is that the JCAHO and UMH both base their goals on percentage completed, so any bonus or incentive plan should match the goals of the Hospitals.

Brochure
The surveys indicated that the house officers are not informed of the case summary completion process and are not aware of the implications of incomplete case summaries. Therefore, a brochure should be developed to educate them of the case summary process. This brochure would have a condensed flow chart of the case summary completion process and an explanation of the importance of completing case summaries in a timely manner. These would be distributed during the orientation process along with instructions on proper dictation methods.

Data Collection
Along with the implementation system, intermittent data collection will be needed to verify improvements in the process and keep a constant watch over the process. This would allow for constant feedback on how the process is performing. Problem areas could be monitored more closely allowing for quicker adjustments to the process.
Communication and Enforcement
Implement better communication between the three segments of the process and strengthen the possibility of taking action against delinquent house officers and attending physicians. Send reports of delinquent case summaries out 3 days after discharge. Contact clinical departments to determine the best method for making sure HO's receive their respective reports.

Although the cost for the whole plan is $449,200, there will be savings from implementing the plan which will offset part of the cost. The monetary savings will occur from having the UMH reimbursed more quickly for the procedures they perform. Interest is lost due to delay in reimbursement. Also, reimbursement sometimes never occurs since the case summaries are so late in being completed. The estimated savings by implementing the recommendations is $121,230 per year (See Appendix). Beyond the financial picture are some non-monetary benefits that should be realized. These include a smoother flow of the case summary completion process, reduced number of records to be pulled for dictation resulting in saved space, fewer searches for patient records, and better patient care after the patient leaves the hospital.

Action Plan
Due to the variety in terms of time and cost of the recommendations, the implementation process will not occur at the same time for all five parts. It will take place in three main segments with each one affecting different areas of the process and taking different periods of time.

Bonus Plan & Incentive System
The plans for the house officers and attending physicians follow a similar approach. After the records are picked up by MRDQ, the person who updates the case summary status (1=not dictated or 2=dictated) will enter data on a spreadsheet (See Appendix). The process will be fairly straightforward: on the chart will be places for the worker to mark if the dictation was completed in one day or less post discharge. There is also another area to mark all dictations required by each house officer. This input will determine what percentage of the case summaries are completed within the allotted time. This added responsibility of inputting data will increase the worker's load,
so some of her work will need to be delegated to other people.

The project team estimates one FTE will be needed to track the percentage of attending physicians who meet the six day hospital goal and for the tracking of the percentages of house officers who dictate within one day. This person will review the outgoing case summaries that are distributed to the attending physicians. She will determine the number of case summaries that the doctor is receiving that day. The number for each doctor will be entered into a spreadsheet (See Appendix), which are available on computer software (such as Excel for the Macintosh, Lotus 1-2-3, or an IBM PC). When the folders are picked up by MWPC, the worker will determine the amount of time the attending physician had the case summary. This is accomplished by looking at the case summary to see the date of transcription. To this date one day is added to allow for delivery time. The worker then counts to see how many days have elapsed to get the number of days the doctor had the case summary. This value is entered on the spreadsheet.

Brochure

With the present system, house officers go through an orientation program which is when the house officers are introduced to the case summary process. The results from the surveys showed that the house officers are not aware of the financial implications of the case summaries, nor do they have a full understanding of the general process. The brochure would have a general flow chart of the case summary process, outlining the general steps involved. Included in the brochure would be an outline of the reasons for dictating case summaries so that the house officers would have a better understanding. The final aspect of the brochure would have a short cost analysis for the savings received by dictating a timely fashion. The brochure would be given out during orientation along with other information about dictating case summaries. The cost of printing the brochure is estimated at $700 for 5000 brochures (using two colors). The information of this report (flow chart, financial implications, reasons for dictating) would be a basis for development of the brochure. The University of Michigan Art School has a class called 'Production Workshop' who do projects such as designing brochures for free as part of the classroom experience.
Data Collection, Communication, and Enforcement

These two aspects will be centered around MRDQ and its staff. The main focal point for MRDQ will be intermittent data collection. This would be done every four months for two weeks. Every four months is often enough for seeing any shifts that may have occured in the completion process, but not so often as to overburden MRDQ with unecessary data collection. Two weeks of collection is needed so that any day to day variations are minimized. The data collection can be done using the two approaches used by the project team:

Data Collection (1) - This data collection involved reviewing the case summaries received each day. For each case summary, a project member found the day of discharge, day of dictation, and day of transcription. The breakdown of the days into days for dictation, days for transcription, and days for signature were as follows: The days for dictation were calculated by adding up the days between discharge and dictation. This gives the number of days elapsed from when the patient was discharged until the day of dictation. The number of days for transcription is obtained by counting the days between the day of transcription and day of dictation. To this number, one day should be added to account for delivery. The data collected during this investigation did not account for this one day of delivery since the project team was not initially informed of this one day delay. This has caused the average time for transcription to be represented one day better than it actually is, and made the time for signing look worse by one day. The time for signature would be found by adding the days from delivery until the day the signed case summary is received back at MRDQ. This method will compare all completed case summaries. This will determine how many are meeting the ten day goal, but also the average for each segment and how far off the mark the different segments are. The time for this is 45 minutes each week day.

Data Collection (2) - This involves receiving a printout of the status of case summaries ten days after patient discharge. This printout gives an exact percentage of the number of case summaries that meet the ten day hospital goal. The printout has the status of each case summary. A person must count how many are completed, how many are transcribed, how many are dictated and how many await dictation, and
divide each number by the number of discharges ten days before. This will give an exact percentage of how well the case summaries are being done and will not be biased by any backlog. This would take about 30 minutes a day.

With the improved case summary process, less time will be needed by MRDQ to track records and contact house officers and attending physicians about delinquent case summaries. This saved time can be applied toward the time needed for data collection and analysis.

The Medical Information Department is planning on installing a new system which will facilitate tracking records and collecting data. This new system will also allow house officers to access the system and see what case summaries they have delinquent. The use of this case summary would be outlined in the recommended brochure. Although the need for sending printouts to house officers concerning their delinquent case summaries might seem redundant after the new system is in operation, that process should be continued. The reasoning is partly that not all house officers will use the new system. Also, the printouts re-emphasize the need to get the case summaries dictated. The sending of the printouts should be done twice a week, instead of the current practice of once a week. Some of the house officers indicated on the surveys that being informed sooner about undictated case summaries would help them get the dictations done faster.

Along with these recommendations, the process flow is expected to undergo some changes which will help improve the current case summary flow. MWPC (Transcription Department) expects to have a digitized recording system in place by the end of 1989. This will result in dictations not being split between two tapes or other problems associated with the current system. House officers will have to redictate less often, which was a problem indicated on the surveys the project team received. Implementing the above recommendations should be brought about with the introduction of the new system to emphasize to the house officers that while more is expected of them, the process will be upgraded to make dictations easier. Less dictations will be lost, so their ability to meet the one day goal will improve.
The implementing of the five parts will not be accomplished immediately. It will occur over the course of a few months until people understand the system and it is running smoothly. The main advantage of the recommendations is that although they are one general plan, they can be implemented separately based on the costs and benefits of each part. When the system is implemented, the case summary completion process will be improved and result in shorter turnaround times for case summaries.
APPENDIX

1) Calculations for savings/cost of incentive and bonus implementation.

2) Case Summary turnaround time data results.

3) Survey that was distributed to the house officers.

4) Results of survey that was distributed to the house officers.

5) Sample spreadsheet for calculating percentages completed by house officers and attending physicians.

6) Flow chart of case summary completion process.

The project team would like to extend a special thank you to people without whose help the project could not have been completed:

Camille VanKirk
Dolorese Umar
Josephine Molle
Financial Analysis

1. Cost for House Officer Bonus Plan:
   It is generally expected that 90% of workers will be able to reach some level of a bonus system. For this reason the project team estimated the percent reaching each level of the house officer bonus to be:
   - 50% will complete at or above Level 1 (70% finished in time)
   - 25% will complete at or above Level 2 (80% finished in time)
   - 12.5% will complete at or above Level 3 (95% finished in time)

   There are 735 house officers currently working at the UMH. This will produce a bi-monthly cost of:
   \[
   \text{Cost} = (\text{Bonus amount})(\% \text{ meeting level})(\# \text{ of house officers})
   \]
   \[
   \text{Cost} = (\$50)(50\%)(735) + (\$100)(25\%)(735) + (\$175)(12.5\%)(735)
   \]
   \[
   = \$52,828 \text{ (every two months)}
   \]
   \[
   = \$316,969
   \]

2. Cost for Attending Physician Incentive Plan:
   The same percentage breakdown is expected for the first two levels of the attending physician incentive plan as it was for the house officers:
   - 50% will complete at or above Level 1 (70% finished in time)
   - 25% will complete at or above Level 2 (85% finished in time)

   There are 689 attending physicians currently working at the UMH. The project team estimates that the five free lunches will cost $25 and the dinner for two certificate will cost $50. Note again, that the doctors receiving the free dinner also receive the five free lunches. This would make the cost for the first two levels be:
   \[
   \text{Cost} = (\text{Bonus cost})(\% \text{ meeting level})(\# \text{ of attend. physicians})
   \]
   \[
   \text{Cost} = (\$25)(50\%)(689) + (\$25 + \$50)(25\%)(689)
   \]
   \[
   = \$21,531/ \text{ two months}
   \]
A trophy establishment quoted prices of $46/plaque. These plaques would be used for the doctor of the month award which would be given to the doctor in each department who had the highest percentage of signed case summaries during the prior two months. The cost would be:

Cost = in initial purchase cost + bi-monthly engraving cost for 12 periods

= (#of departments)(cost/plaque) + (# of people)($2/name)(12)

= (87)(46/plaque) + (87)($2)(12 periods)

=$6090 every two years (plaques last two years before filling)

= 3045 year

Cost = Bonus cost + Plaque cost

= $21,531(6 periods) + $3045

= $132,231/year

3. Expected Savings:

The potential savings of having case summaries completed earlier is based on the following formula:

Potential Savings = (outstanding case summaries ($))(interest) + (reduced loss from uncollected case summaries)

Currently, the UMH have $4,000,000 outstanding in case summaries. The length of time that this covers averages to three months. The interest is altered to account for only three months and not one year:

Potential Savings = ($4,000,856)(3 months/12)(12% interest) = $120,025.

When compound interest is included, the figure becomes $121,230.

The project team was unable to obtain information regarding money never received due to very late case summaries.
DATA ANALYSIS OF RECORD COMPLETION
(Sample Size of 335 Case Summaries)
(December, 1988)

Dictation Values:
Mean = 8.146 days
Median = 1 day
Mode = 1 day
70.15% were completed in one day or less. (235/335)
78.81% were completed in three days or less. (264/335)
90.00% were completed in twenty-eight days or less. (302/335)

Transcription Values:
Mean = 1.767 days
Median = 3 days
Mode = 3 days
17.61% were completed in zero days. (59/335)
37.91% were completed in one day or less. (127/335)
68.06% were completed in two days or less. (228/335)
99.70% were completed in three days or less. (334/335)

Signature Values:
Mean = 12.713 days
Median = 7 days
Mode = 7 days
11.04% were completed in four days or less. (37/335)
21.49% were completed in five days or less. (72/335)
31.04% were completed in six days or less. (104/335)
66.27% were completed in ten days or less. (222/335)

Total Values:
Mean = 22.627 days
Median = 8 days
Mode = 8 days
12.24% were completed in seven days or less. (41/335)
36.12% were completed in ten days or less. (121/335)
50.75% were completed in twelve days or less. (170/335)
63.88% were completed in fifteen days or less. (214/335)

Note: Boldface values are for the UMH goal.
DATA ANALYSIS OF RECORD COMPLETION  
(Sample Size of 922 Case Summaries)  
( March 4 - 18, 1989)  

Dictation Values:  
Mean = 13.486 days  
Median = 1 day  
Mode = 0 days  
57.91% were completed in one day or less. (647/922)  
66.27% were completed in three days or less. (611/922)  
88.40% were completed in twenty-eight days or less. (815/922)  

Transcription Values:  
Mean = 1.32 days  
Median = 1 day  
Mode = 1 day  
11.20% were completed in zero days. (102/922)  
62.90% were completed in one day or less. (572/922)  
94.14% were completed in two days or less. (868/922)  
99.46% were completed in three days or less. (917/922)  

Signature Values:  
Mean = 11.85 days  
Median = 7 days  
Mode = 6 days  
20.70% were completed in four days or less. (191/922)  
31.45% were completed in five days or less. (290/922)  
48.60% were completed in six days or less. (448/922)  
74.50% were completed in ten days or less. (687/922)  

Total Values:  
Mean = 26.465 days  
Median = 11 days  
Mode = 7 days  
28.85% were completed in seven days or less. (266/922)  
46.85% were completed in ten days or less. (432/922)  
55.68% were completed in twelve days or less. (513/922)  
62.30% were completed in fifteen days or less. (574/922)  

Note: Boldface values are for the UMH goal.
DATA ANALYSIS OF RECORD COMPLETION
(Sample Size of 895 Case Summaries)
(April 3 - 17, 1989)

Dictation Values:
Mean = 14.40 days
Median = 1 day
Mode = 0 days
55.08% were completed in one day or less. (493/895)
66.70% were completed in three days or less. (597/895)
85.70% were completed in twenty-eight days or less. (767/895)

Transcription Values:
Mean = .98 days
Median = 1 days
Mode = 1 days
26.93% were completed in zero days. (241/895)
83.02% were completed in one day or less. (743/895)
97.88% were completed in two days or less. (876/895)
99.44% were completed in three days or less. (890/895)

Signature Values:
Mean = 9.20 days
Median = 6 days
Mode = 3 days
29.83% were completed in four days or less. (267/895)
42.46% were completed in five days or less. (380/895)
55.64% were completed in six days or less. (498/895)
79.78% were completed in ten days or less. (714/895)

Total Values:
Mean = 24.58 days
Median = 10 days
Mode = 6 days
32.96% were completed in seven days or less. (295/895)
51.06% were completed in ten days or less. (457/895)
57.65% were completed in twelve days or less. (516/895)
65.25% were completed in fifteen days or less. (584/895)

Note: Boldface values are for the UMH goal.
Survey for House Officers

Originating Department: Medical Records Data Quality (MRDQ)
Date: April 6, 1989

This survey is being conducted by the Medical Information Department to assist the house officers in completing the case summaries. The rating system uses a scale of 1 to 5, 1=almost never (AN) through 5=almost always (AA). Please take a few minutes to fill out this survey. Please return to Liz May, House Officers Association, Room 2F208, Box 0052. Thank you.

Home Department: ____________________________
Physician Number (optional): ______________________

1) Patient records are available when I need to dictate the case summary.
   (AN) 1 2 3 4 5 (AA)

2) I complete dictations while the record is on the floor.
   (AN) 1 2 3 4 5 (AA)

3) I call MRDQ to have records pulled for dictation.
   (AN) 1 2 3 4 5 (AA)

4) I am able to go to MRDQ to dictate records on the same day that I request to have them pulled.
   (AN) 1 2 3 4 5 (AA)

5) It is my responsibility to review the case summary when the attending physician receives it for signing.
   (AN) 1 2 3 4 5 (AA)

6) I have to redictate case summaries.
   (AN) 1 2 3 4 5 (AA)

7) I receive weekly reports indicating case summaries that need dictation.
   (AN) 1 2 3 4 5 (AA)

8) The reason I dictate records is:
   a) Required by my clinical department
   b) Courtesy to referring physicians
   c) For financial reimbursement purposes
   d) Continuity of patient care

9) I feel that if a bonus/incentive were offered to dictate case summaries it would motivate the house officers to dictate case summaries on a more timely basis.
   YES NO

10) I feel that dictation of case summaries can be made easier by: (Please write comments on back side)
Survey for House Officers

The rating-system: 1=almost never (AN) through 5=almost always (AA).

1) Patient records are available when I need to dictate the case summary.
   Mean = 3.4
   Mode = 3

2) I complete dictations while the record is on the floor.
   Mean = 3.8
   Mode = 4

3) I call MRDQ to have records pulled for dictation.
   Mean = 3.2
   Mode = 4

4) I am able to go to MRDQ to dictate records on the same day that I request to have them pulled.
   Mean = 3.5
   Mode = 4

5) It is my responsibility to review the case summary when the attending physician receives it for signing.
   Mean = 1.5
   Mode = 1

6) I have to redictate case summaries.
   Mean = 2.1
   Mode = 2

7) I receive weekly reports indicating case summaries that need dictation.
   Mean = 2.1
   Mode = 1

8) I feel that if a bonus/incentive were offered to dictate case summaries it would motivate the house officers to dictate case summaries on a more timely basis.
   YES = 22
   NO = 11

9) The reason I dictate case summaries is:
   (46) Required by my clinical department
   (26) Continuity of patient care
   (24) Courtesy to referring physicians
   (10) For financial reimbursement purposes

10) I feel dictation of case summaries can be made easier by:
    - MRDQ should have charts available for house officers
    - Leave record on floor for more than one day
    - Alert house officer sooner about undictated case summaries
Sample Spreadsheet for Calculating Percentage Completion

The following pages demonstrate an example of the tracking procedure and method of percentage calculation for the bonus/incentive system. Following the example, are two blank copies of the spreadsheet. The spreadsheets can be used for both the House Officers and the Attending Physicians to determine their percentage completed of the case summaries.

The columns of the spreadsheet are labeled with Physician's Name, Number, Department, day of the month, Totals, % Complete, Ranking and Bonus Level. The totals should be calculated monthly, while the percent complete and ranking (for Attending Physicians only) should be done bi-monthly. Each physician has two lines for data entry. The first line represents the daily number of case summaries that have been dictated within one day (for House Officers) or the number of case summaries that have been signed within six days (for Attending Physicians). The second line represents the daily number of case summaries that the physician was responsible for dictating or signing. These values can be tabulated manually, utilizing the spreadsheet as a table for recording the values. At the end of the first month of a two month period, the worker determines the sum of each row for each physician. The same process is followed for the second month, except that the total for the second month will be a sum of the row totals for both months. The percent complete is calculated by: \( \frac{(1st \ row) \times 100}{(2nd \ row)} \). The ranking is used for the Attending Physicians, in order to find the physician who has the highest percent complete for his/her department. The last column, Bonus Level, refers to the following levels:

**House Officers:**

- Level 1 - corresponds to 70 - 80% complete.
- Level 2 - corresponds to 80 - 95% complete.
- Level 3 - corresponds to more than 95% complete.

**Attending Physicians:**

- Level 1 - corresponds to 70 - 85% complete.
- Level 2 - corresponds to more than 85% complete.
- Level 3 - corresponds to Attending Physicians who have highest percent complete for their department.
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<th>DEPARTMENT</th>
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