

AN ABSTRACT OF THE THESIS OF

Chris "K" Sturgeon for the degree of Master of Science

in Pharmacy presented on November 14, 1979

Title: The Development and Evaluation of a Documentation System for

Control of Nursing Home Patient Care Orders

Redacted for privacy

Abstract approved: _____

Robert W. Sager

The development and evaluation of a system for the handling, maintenance and transcription of nursing home patient care orders are described.

Before implementation of this documentation system, the study nursing home was found to be out of compliance with various state, federal and professional practice standards related to patient care orders.

System implementation, with strict monitoring, extensive staff development and ancillary personnel education, both in the classroom and the patient care areas, occurred in two phases over a twelve month period.

Following implementation of the system, there were no areas found to be out of compliance with state or federal standards in patient care order documentation.

It is concluded that implementation of the documentation system can provide control of nursing home patient care orders, can be adopted with relative ease by both Intermediate Care Facilities and Skilled Nursing Facilities, and can provide methods to improve the performance of nursing home providers in all patient care order areas.

The Development and Evaluation of a Documentation
System for Control of Nursing Home
Patient Care Orders

by

Chris "K" Sturgeon

A THESIS

submitted to

Oregon State University

in partial fulfillment of
the requirements for the
degree of

Master of Science

Commencement June 1980

APPROVED:

Redacted for privacy

Professor of Pharmacy in charge of major

Redacted for privacy

Dean of Pharmacy School

Redacted for privacy

Dean of Graduate School

Date thesis presented

Nov. 14, 1979

Typed by Sharon Mosley for Chris "K" Sturgeon

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INTRODUCTION

The relatively recent growth in state and federal social programs, with a subsequent influx of dollars, regulation, and scrutiny, has placed a burden of accountability on providers at a rate often exceeding their short term capabilities. One such provider is the nursing home industry, which, for this paper includes both Skilled Nursing Facilities and Intermediate Care Facilities.

Skilled Nursing Facilities (SNF's) provide skilled nursing and rehabilitation services at a level just below acute care hospitals.¹ Intermediate Care Facilities (ICF's) provide nursing, maintenance care, and rehabilitation services at a level somewhat below SNF's.²

The ICF's and SNF's are regulated by many agencies, including both state and federal bodies. As such, they bear the burden of accountability in the provision of services.³ Furthermore, these providers must show accountability to the general public and certain interest groups. Because of the problem imposed by accountability requirements in nursing homes, these providers are often found to be out of compliance with relevant standards and lacking in short term capabilities for achieving compliance.

Physical, psychological, and social patient care are the primary functions of a nursing home. Physicians' patient care orders are the

means for implementation of that care, and one important standard involves these orders. The provision of services resulting from these orders is measured primarily by documentation in the patient's medical record.

Oregon State Health Division records show that a great number of nursing homes are out of compliance with state and federal interpretive legislation in the area of patient care order documentation.⁴ Non-compliance with patient care order documentation includes several factors. First, orders are administered without a physician's order. Second, orders are not administered in accordance with a physician's order. Third, drug regimens are not monitored correctly. Fourth, proper documentation of order administration is not maintained. In addition, there is no generally available detailed documentation policy and procedure manual for the handling, maintenance, and transcription of patient care orders. A general literature review shows scattered publications regarding the importance of documentation in nursing homes, but the literature is seemingly void of specific and detailed information on patient care orders.^{5, 6, 7, 8, 9, 10}

Due to the overwhelming accountability burden and resultant non-compliance of many Oregon nursing homes, this study was designed to develop and evaluate a documentation system for control of nursing home patient care orders. By this means, an Oregon nursing home could be brought into compliance with federal, state, and professional practice standards in the handling of patient care orders. Since being in compliance or out of compliance is a gross subjective measure of the

facility's general performance, more detailed factor analyses were rendered as a test of the system's utility and potential.

METHODOLOGY

The documentation system was designed and implemented in two phases, with the initial design commencing early in 1977 and initial implementation in April 1977. The first phase addressed itself to a most difficult problem facing nursing homes in reference to patient care order documentation, namely, proper documentation of "PRN" (as needed) order administration.^{4, et al.} Proper documentation includes accurate documentation of administration, reason for the administration, and the patient's response to that administration for all "PRN" orders, which include not only medications, but treatments and other therapies.¹¹ Forms were designed, as were appropriate policies, procedures, and lines of accountability for the handling of these orders. On April 1, 1977, this subsystem was implemented in an eighty bed SNF-IFC facility in Oregon which was previously "out of compliance" with the four areas mentioned above. The subsystem was utilized and revised for a period of twelve months before evaluation.

The primary form utilized was the PRN Administration Record (Figure 1). It was utilized for documenting reasons and response for all "PRN" orders administered. It was maintained with the Order Administration Record (Figure 2) in the facility medication administration Kardex. Documentation was done on the "PRN" record as part of the nurses' notes. Each line in the "reason" column corresponds

to the same line in the "reaction" column. (Form utilization was relative to use, ranging from a few days to several months.)

Evaluation of the subsystem performance was concerned with compliance conformance as provided by the state licensing and certification agency. In addition, the medical records for all 56 patients who were in the facility from March of 1977 to March of 1978 were examined. Evaluation was based on a comparison of numbers of "PRN" medication doses dispensed, numbers of "PRN" orders administered, numbers of "PRN" order "reason" documented, and corresponding "response" or "reaction" documentation. The study months chosen represent periods before and after subsystem initiation.

Second phase development began in April 1977 with design of an integrated documentation system including detailed policy, procedure, and accountability standards. Implementation took place during the period from October 1977 through the end of the year. As with phase one, twelve months were allowed before evaluation.

The documentation system centers around a five part form developed for patient care order documentation and maintenance. The basic form is composed of two 8½" x 11" and three 8½" x 13" "NCR" pages. Page one, which is white, is the physician order administration record (Figure 2). Page one is used primarily by the facility to document the administration and application of all physician orders. This includes not only medications, but also treatments, vital signs, and routine tests. In this respect, the record is a single source document with obvious advantages in continuity and control. The form was designed to allow the physician-oriented total plan of care to be

represented with indicators needed for valid order administration. Page one allows appropriate space for the pharmacist and/or nurse to document review of the profile.

Page two, which is yellow, is the physician's reorder form (Figure 3). This page is used by the facility to show the physician his current orders and related information. The physician also uses the form to authorize continuance of these orders with any additions or deletions which may be subsequently ordered for the month indicated by the inclusive dates at the upper right hand corner. This page also allows the physician to make current order changes in the space provided above his signature.

Page two resembles page one with several modifications indicated for its function. All initial transcription information placed on page one automatically appears on the following four pages. Modifications include the replacement of order administration documentation area from page one with an area for optional use by the facility or the physician for special communication.

Page three, which is blue, is the pharmacy dispensing and permanent prescription record (Figure 4). This page contains all the information provided on page one with specific additions for pharmacy use including dispensing documentation, drug interaction format, and pricing.

Page four, a gold page, is the patient's bill (Figure 5). It contains the same information as the pharmacy dispensing record with confidential areas blocked out.

Page five, a green page, is a permanent facility office record of the patient's bill. This page contains exactly the same information as page four. The five part form is adaptable to a variety of pharmacy dispensing systems, facility documentation systems, and computerization.

The policy, procedure, and discussion manual for utilization of all forms and for implementation of the documentation system covers all areas involved with the handling, maintenance, and transcription of physician's orders. Implementation of this system involved strict monitoring with extensive staff and ancillary personnel education, both in the classroom and "on the floor".

As with first phase evaluation, gross compliance performance was examined to determine the impact of phase two implementation. In addition, specific performance factors were evaluated using the same methods and study parameters described in phase one evaluation.

RESULTS AND DISCUSSION

The results from phase one analysis are summarized in Table 1. Prior to subsystem implementation, 62% of the "PRN" order administrations had the needed "reason" for administration documentation. Of these 558 "reasons" recorded, only 56, or 10% also had the supporting "response" to the administration documented. These results point out a gross lack of adequate source documentation which is necessary for day-to-day and long term patient care. These statistics support the state agency's determination that the facility was out of compliance in the area of proper documentation of "PRN" order administrations. The results were not altogether surprising. The traditional system utilized by the facility for documentation of "PRN" orders allowed easy breakdown in continuity. Memory was the sole means of ensuring the multiphase documentation. Second, documentation records were maintained at different locations (i.e., medication Kardex, patient's chart). Third, performance was difficult to monitor and assess primarily because "reason--reaction" documentation was combined within the general nurses' notes. And fourth, documentation procedures were cumbersome and time consuming for nursing staff.

Performance was assumed to improve with phase one sub-system implementation following the procedure manual. The basis of this assumption was generated from the procedural format. Phase one implementation saw memory replaced by reminders. The space provided

for the patient's response following "reason" documentation space on the "PRN" administration record serves as a reminder for proper documentation. The record itself serves as a reminder for documentation because it is maintained opposite the order administration record in the order administration Kardex. In addition, performance is easily monitored and assessed, resulting from single storage location and singular content of the record. Finally, having all "PRN" order documentation records in one location allowed easy utilization by nursing staff and required less time for documentation.

The assumptions were, for the most part, confirmed as the results following phase one implementation were extracted. This summary is shown in Table 1 with a performance increase of 84% for "reason--reaction" documentation. The facility was found to be in compliance for the area of "PRN" documentation by the appropriate state agency nine months following sub-system implementation.

Phase two of system development and evaluation addressed a wide variety of problems including the "system" of documentation itself. Performance of the system was often subjective, relying on assessment by facility personnel. Selected areas were objectively observed in assessing the performance, as they were specifically designated as "out of compliance" by the appropriate auditing agencies.

Through simple format procedures, compliance difficulties relative to pharmacy service documentation as a functional part of proper order documentation were corrected. One example incorporated pharmacy involvement in order implementation, maintenance, and administration with regular system functions. Pharmacy services were brought into the

mainstream of physician patient care order control. A majority of these orders involved medications. Through these means validity of the patient care orders was assessed on a regular basis in relation to the patient's response to facility care. This pharmacy involvement aided the development of a continuous and documented assessment of the physician's patient care orders in relation to the patient's response.

Another area of non-compliance prior to system implementation involved administration of medications and treatments without a physician's order. The general problem ranged from nursing personnel prescribing and administering treatments and medications requiring a physician's order to orders not reauthorized in accordance with legislative standards. In Oregon it is required that a physician reauthorize orders every thirty days, or the order becomes invalid. If nursing personnel administer these orders without reauthorization, they are, in fact, doing so without a valid order. Phase two addressed this broad area of noncompliance. Prior to system implementation more than seventy-five percent of physician orders were reauthorized improperly. Through system implementation and a cooperative effort with the medical records consultant of the State Licensing Agency, the facility was brought into compliance. Corrective measures involved consistent control of physician order reauthorization leading to compliant reauthorization methods for all physician orders.

Some other forms of incorrect order administration were difficult to assess as documentation was not maintained. Through a staff survey an estimated thirty to forty-five doses of medications (usually over

the counter preparations) were thought to be administered without a physician's order. In addition, several treatments were administered in the same manner. Because of its nature, the problem was approached through staff education and strict control via the pharmacy and patient care order control policy. Although absolute control could not be documented, the probability of noncompliance was reduced simply because access to medication and discretion in the choice of medication are reduced via the distribution and documentation system.

The staff became much more cognizant of the problems related to incorrect administration and the ongoing assessment of their performance in this area. A very important concept incorporated into the documentation system was that, without exception, no order was administered unless it appeared on a current physician's order administration record. In addition, no order was placed on the record or removed from it without a valid physician's order, and all physicians' orders were maintained on this record. This created a single source document for the handling of all physicians' orders, including medications, treatments, physiological tests, and all other patient care orders. Resultant administration documentation was also concentrated, allowing for easier assessment and control.

A final area specifically assessed in relation to phase two performance evaluation involved order administration in accordance with a physician's order. It was observed prior to system implementation that occasionally orders were administered not in accordance with a physician's order. The reasons generally were related to misinterpretation by nursing staff at the time of order initiation or

administration, transcription errors, or failures to administer. The facility was found to be out of compliance with state and federal legislation in this area. Analysis revealed specific discrepancies for the study period before and after implementation of the documentation system. The documentation system incorporated policies and procedures which address these problems. Because all original physicians' orders were reviewed by both nursing staff and a pharmacist, there was dual interpretation of all orders. The pharmacy functions served to reinforce the interpretive role. In addition, nursing staff and a pharmacist were involved with transcription verifications, providing a vital ongoing system function. Because the order administration record was the system's most important functional source document, its accuracy was vital. Administration procedures included, among other things, concurrent charting of order administrations using the order administration record as the source. This procedure allowed the well-known benefits of concurrent charting, as opposed to pre-charting or post-charting.

In addition, fewer failures to administer orders occurred, primarily because all orders were maintained on one record which was consistently assessed for performance accuracy, and because no orders were removed from the source record without a valid physician's order. Through these means and other related procedural functions, the facility was again brought into compliance with legal standards. Following system implementation, there were no areas found to be out of compliance with federal or state legislation in the area of patient care order documentation. Prior to implementation, the deficiencies were numerous.

CONCLUSION

The conclusions offered are for the most part positive. The policies and procedures utilized for system implementation were adequate and functional, but were still only as good as those persons responsible for implementation. Breakdowns in the system were observed where implementation deviated from prescribed policy and or procedure. Although the forms were specifically designed for this documentation system, many other forms found on the market may also be adequate. In addition, the system is adaptable to a variety of dispensing and administration methods although being particularly suited for "unit dose" drug distribution systems. Direct computerization of the system is possible.

It seems that whatever the documentation system, one must rely on more than the compliance performance required by state and federal agencies to assess the true performance and function of the documentation system. The facility can be in compliance in the prior respect, and continue to have problems in system control and function.

Indicators set forth in this study support the hypothesis that implementation of the documentation system will provide for control of nursing home patient care orders. The system can be adopted with relative ease, requiring moderate educational measures, to both Intermediate Care Facilities and Skilled Nursing Facilities. When

implemented, the system shows the capability to improve the performance of nursing home providers in all patient care order areas.

The system described in this paper was developed to provide control of nursing home patient care orders. It was shown that within an 80 bed skilled nursing facility intermediate care facility, this documentation system did bring the nursing home into compliance with state and federal legislation. It is hoped that this study may be of value to other nursing homes that may be considering a complete control system for nursing home patient care orders.

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APPENDIX

TABLE 1

	Doses Dispensed	Doses Administered	Reasons Documented	Reactions Documented
Prior to System Implementation	598	898	558	56
12 Months After Implementation	371	490	294	275

*Illustrates results of "PRN" documentation subsystem

Figure 5. Patient B111/Office Record.

Allergies											Admitted _____ thru _____ 197__															Units	Each	Price	Rx No.									
O.O.	Physicians Orders	No.	Hr.	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25				
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Attending Physician _____	
Alternate Physician _____	Wt. _____
Bed _____	Patient _____ D.O.B. _____