Service Records and Their Administrative Uses

Experience from a School Health Service *

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EVERY administrator, particularly in a wartime period, looks for ways in which to switch his staff from less to more productive activities. Saving time in record keeping is one way of making time for other activities, but if few records are kept they must be chosen carefully and with an eye to their utility. Too frequently facts and figures are accumulated with little attention paid to their utility. The following account describes efforts of the physicians, nurses, and statisticians of the New York City Department of Health to make the most of keeping records of daily performance in the school health service.

BASIC ASSUMPTIONS

Certain basic assumptions can be made in designing any record system.

1. Every item recorded must have some practical usefulness other than mere enumeration. An unused item has no place in a recording system.
2. Items to be used for administrative purposes should measure quantitatively accomplishment of some specifically defined procedure.
3. The procedures thus measured should relate in some clearly defined way to a stated objective of the service being analyzed. Stating the objectives of the service as exactly as possible is thus the first step in building a recording system.
4. The practical effectiveness and success of a form of recording is dependent upon the following factors:
   a. Adequate field trial and opportunity for discussion and criticism by those who are to do the recording before final adoption of the system.
   b. Training of this recording staff in how to fill in items and constant check-up to see that instructions are being followed. They should also understand to what use the recorded items will be put.
   c. Continuous use of recorded data in interpreting to the field staff the aims and accomplishments of the service. It is only as the staff finds data useful that they are interested in keeping them accurately.
   d. Continuing modification of form to meet changes in procedures and objectives when they occur and the removal of useless or commonly misinterpreted items.
   e. Usefulness of recorded data for research or year to year comparisons must be limited to those data for which the definitions can be held constant, and the recording of which is known to be accurate.

BUILDING A ROUTINE RECORDING SYSTEM

In line with such basic assumptions, the primary objectives of the school health service as currently operating were set down as follows:

1. To find those children with health problems.
2. To help these children receive that kind of

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professional care (medical, dental, social service, etc.) which could be presumed would lead to amelioration or correction.
3. To make the experience with the school health service an educational one for the child, his parent and his teacher.

A next stop in building the recording system was an examination of the procedures which it had been decided would be used to accomplish these three objectives. For example, in finding a child with a health problem (objective 1) the following procedures were agreed upon as most important:

1. The complete physical examination (including a good medical history) of all children newly admitted to school.
2. A yearly conference (the so-called Teacher-Nurse Conference) between teacher and nurse on the status of each child in the class, including a review of the child's medical record and a health record kept by the teacher. The latter includes semi-annual vision and audiometer tests in the classroom. As a result of this conference certain children are sent to the doctor for examination.
3. A "screening" examination by the doctor of children who the nurse or the teacher may feel have health problems.
4. The complete examination of a child who has a *definite* health problem—the so-called "specially referred" examination.

Other objectives were scrutinized in a similar manner to determine the specific procedures which should contribute to the accomplishment of that objective.

The next step was to build the specific items to be recorded. Usually answers to the following questions gave the pertinent items:

1. What has been done?
2. What has resulted from the work done?
3. What is left to be done?

For example, in building the items which should determine the effectiveness of the teacher-nurse conference these questions were asked:

1. How many classes have been done?
2. How many children are in the classes in which conferences have been held?
3. How many children were selected at those conferences for screening examination, specially referred examination, and follow-up?
4. How many classes are still to be done?

The exact items to be recorded became:

1. Teacher-nurse conferences completed.
2. Registration of class in which teacher-nurse conference was completed.
3. Children selected at teacher-nurse conference for new follow-up of a health problem.
4. Teacher-nurse conferences pending at the end of the month.

These items gave answers to the three pertinent questions about the teacher-nurse conference: What has been done? What resulted from it? What remains to be done?

Space was left on the recording sheet for five undetermined items. These could be used from time to time to record data desirable on some special occasion. This allowed special studies to be made of some particular activity without changing the entire system. Newly proposed items could be tried out for a short time to test their usefulness before adoption without setting up a special record. Such blank spaces on recording sheets allow for greater flexibility of recording and should not be omitted.

The routine items were recorded daily in the schools on a sheet with sufficient vertical spaces for one month's record, allowing for day-to-day observation of accomplishment.

The exact directions for recording were printed on the reverse of each of these sheets. Thus every recorder was constantly faced with definitions and directions, leading to greater uniformity and accuracy of recording than when instructions were given verbally in staff meetings, passed on from person to person, or even written out in a manual of procedures, usually not directly at hand when the recording was done.

In the course of building the record

system numerous meetings were held with school nurses and doctors, supervisors, health officers, statisticians, all those interested in the records in any way. Almost an entire winter was devoted to the discussion of the revisions proposed. When finally adopted one group of trained staff met with small groups of field workers, explaining the revised record, interpreting the items, emphasizing the use which they as field workers could make of the figures, etc. There were some difficulties in getting the staff to adopt the new forms, difficulties usually associated with the adoption of any new procedures. Some resented the fact that their particular suggestions were not adopted. Some clung tenaciously to old familiar ways. Others resented the fact that they were not recording *everything* they did, feeling that in some way the credit due them would not now be forthcoming. Others to whom records had always been a nuisance, looked on the new forms as merely another kind of nuisance. Obviously time spent in educating the staff about records helps overcome such difficulties. Special attention should be given to developing staff understanding of the record keeping system, and when changes are made, why they have been made.

USE OF THE SERVICE RECORD

The chief administrative uses to which this type of record have been put are planning the immediate program, supervising staff, finding new problems, deleting nonproductive procedures, and preparing annual budgets and reports. We shall discuss certain of these in some detail. It should be emphasized that the recording system being discussed in no way attempts to measure the quality of service given. That must be determined in other ways. But figures of this kind correctly used can be of help in improving the quality of the service.

PLANNING IMMEDIATE WORK

The recording system gave figures for the work accomplished and work pending. Herein lay one of its chief values. The staff had tools whereby their future activities could be more accurately planned. They knew what they had done and what remains to be done. Progress in different activities could be measured and the next month's or week's work planned. How this worked in one school can be seen in Figure 1 in which progress in three activities of the school health program for one academic year are recorded.

The abscissae indicate the successive months of the school year. The figures in each case are cumulative to indicate the progress of the work from the beginning to the end of the academic year. The ordinates indicate the work performed. It will be noticed that the scale value changes in each case because of the variation in absolute numbers to be achieved in the year.

The relationship between the scales is that derived from the average performance throughout the city. Thus in general we observed that approximately six screenings were selected per class, or four specially referreds for every six screenings. This in no sense implies that a relationship is necessarily desirable within any one school, but it gives a convenient base line. Section I indicates progress in completing teacher-nurse conferences. The program in this school was so planned that they were almost completed before the last two months of school, allowing time for follow-up of the cases selected in the conference. It will be seen that in the seventh month a considerable increase occurred. Actually this was a result of planning, for by the end of the sixth month it was evident that teacher-nurse conferences were lagging.

Section II shows the number of

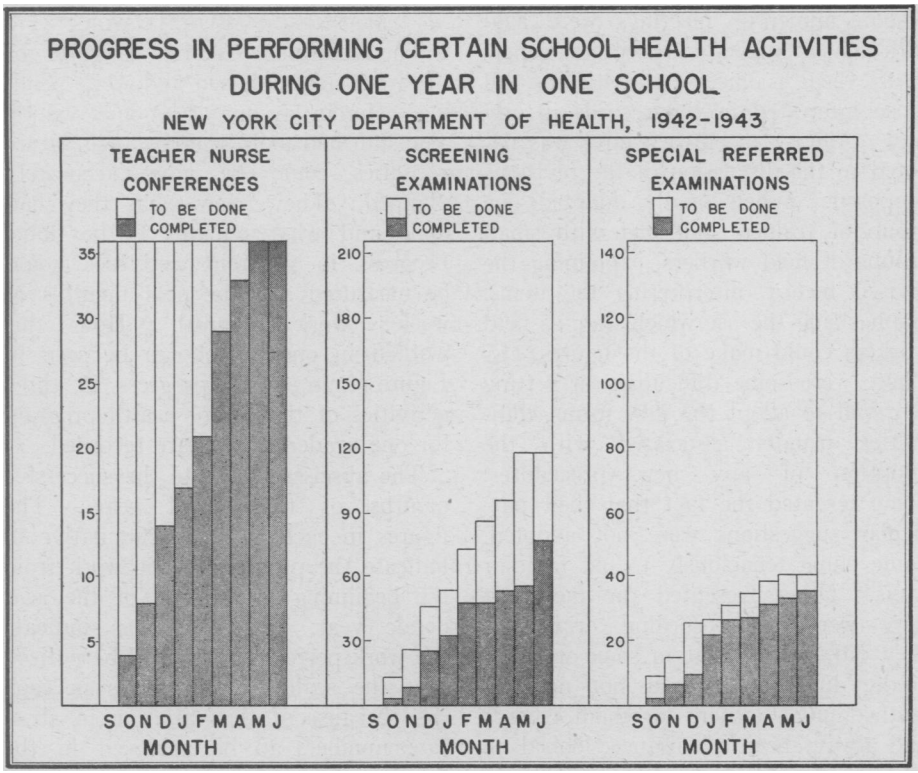

FIGURE 1

"screening examinations" to be done and the number completed each month. Obviously the work to be done piled up during the year, and though many examinations were made each month, at the end of the year some were still left to do. This fact poses a number of problems for the supervisor. Was there too little doctor's time for examinations? Was the doctor busy enough when he was there or could he have examined more children? Could more staff be assigned? Did all the cases the nurses selected actually have medical problems? Should she use a finer screen and select fewer children? All of these questions arose and, obviously, as is to be pointed out, produced material for investigation and for staff education. But let us reëmphasize that each month the staff had before them a picture of what lay ahead, and though they did not complete their screening examinations this year, they planned to work differently the following year.

Scrutiny of Section III shows progress in completing specially referred examinations. Here the record is better, a larger percentage of these examinations was completed each month than screenings except in the first four months of the year when it was recognized that newly admitted children (not shown in Figure 1) were taking the doctor's time.

On a city-wide basis the recording system was also useful in advising staff of parts of the program that needed to be specially planned for. Sometimes danger signals were raised and could be heeded as soon as they appeared. Thus, for example, the district health officers could be warned

when the first quarter's figures were analyzed.

"Only 26 per cent of the teacher-nurse conferences have been completed. At this rate it would seem that they will probably not be completed during the school year. The range in the percentage completed in the various districts is from 14 per cent to 51 per cent, indicating a rather wide variation in program planning. If the children selected as a result of these conferences are to have medical attention during the school year, it would seem wise to reëxamine the district program at this time."

The items selected also proved useful in budgeting time and work at the beginning of the school year or semester. The previous year's experience was used in estimating how much work might be done another year. When insufficient staff time was available to complete all activities, those of lesser importance could be dropped from the semester's program, thus assuring the completion of the more important.

In the field it often became evident that the current assignment of staff was not related to the work to be done. For example, physicians had often been assigned on a routine basis of so many visits to a school each month, usually in proportion to the registration of the school. Now they could be assigned on the basis of the work which currently remained to be done in that school. Sometimes the ratio of nurse's to doctor's time was out of line with the job to be done. Most of the children, for example, who had been selected for examination might have been seen by the doctor in one school and yet the nurse there was far behind in her classroom conferences with the teacher. If the doctor were to be assigned to the school some kind of

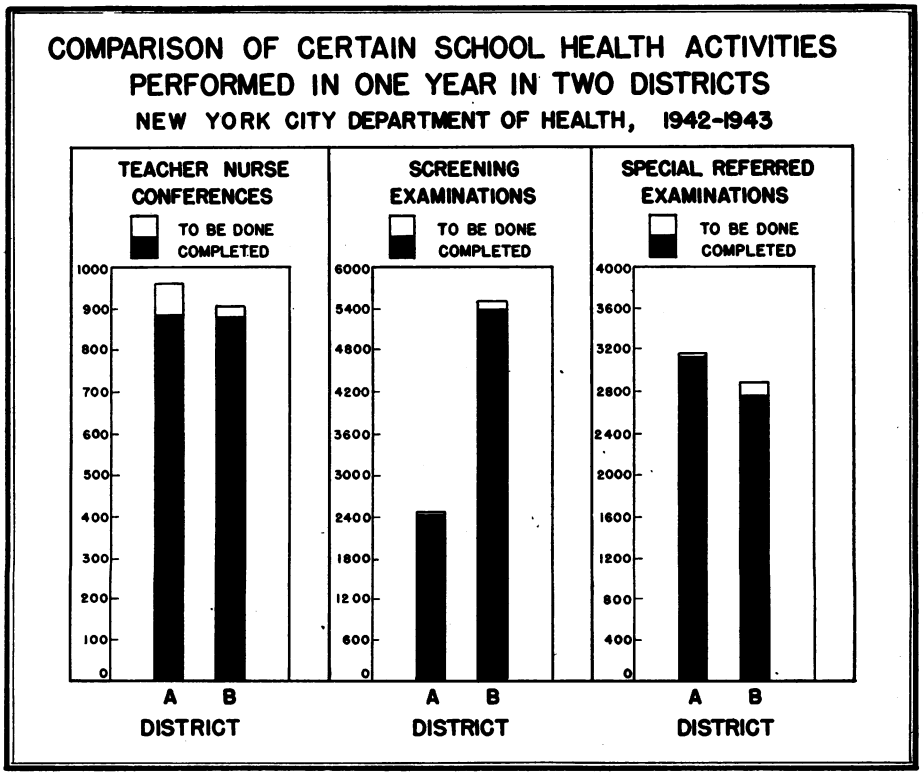

FIGURE 2

work would be found for him—to be sure—but in another school his time was desperately needed to complete work undone there.

SUPERVISION AND TRAINING OF STAFF

As previously pointed out, this type of recording is not designed to measure the quality of work done. Nevertheless, it may do so under certain circumstances. It points the way to spots where the job is not being done and who is not doing it, so that supervisors can concentrate on areas where help is needed. If we examine Figure 2, we see an example of this kind.

Here three activities are plotted for two districts, A and B; districts with approximately the same school population, with the same economic status of its population, districts in which there is no reason why school activities should not be quite similar. This chart is drawn in the same manner as Figure 1 except that the figures are total for the year rather than indicating the cumulative figures by months. Again the ordinates indicate the actual amount of work completed. One can see that approximately the same number of teacher-nurse conferences were completed in the two districts, although there is a slight difference in the number of those left undone. In section III, one notes that there is only a slight difference between the number of children selected for specially referred examinations and the number completed. In section II, however, one sees that in district B almost twice as many children were selected for screening examinations as in district A. Here was a specific problem for supervisors to investigate—apparently, the basis for selection was quite different in the two districts.

Supervisors also found that with specific facts on the current performance of the service and on the work that was not completed, they had materials for staff training. Moreover, the mere fact that the objective of the service had been defined in easily understandable terms and that procedures had been specifically outlined helped the staff to understand their jobs better and produced additional materials for staff training.

It is also believed that because the system was devised not by a few top administrators but with all those who were finally going to use it, rapport was improved. Focusing interest on the job to be done as indicated by the figures and not on difficulties in interrelations of staff also helped develop a new kind of working spirit, and was of assistance to those who were supervising the services. In brief, to be effective the supervisor needs good figures on staff performance, but he also needs to use the figures wisely.

In brief the supervisor has a twofold task. The first is the guidance of the staff in the understanding and clarification of the objectives and procedures involved. The second is interpreting to the staff their progress in achieving the objectives of the program.

The question of time taken in recording such figures may be raised. Every school health service keeps some kind of service record. Most of the ones we have seen are much more complicated. In less than five minutes a day the nurse in the school can record the items we have discussed. And the staff feel that much time has been saved with the revised system because the work to be done can be more efficiently planned for.

DIFFICULTIES IN USING SERVICE RECORDS

There is nothing in the recording system we have just described which helped overcome the common difficulty in all such systems—namely, difficulty in the interpretation of the average or index figure. For example, the occur-

rence of an average figure of 20 per cent of the children selected at teacher-nurse conferences for the City of New York is not an indication that is a "good" or "true" figure. In our experience, there is the tendency to ascribe variations among districts or schools to some abnormality and to seek to drive these "odd" occurrences back into line instead of realizing that spread is a normal phenomenon. The causes of any variation are too frequently overlooked and a bias is thereby introduced on figures subsequently recorded by implanting in the staff a belief that the average figure is desirable.

Great care was taken, therefore, to point out that a figure which was far from average, indicated a need for investigation, but that the figure itself was not to be used as a whip. An example may make this clear. A school nurse in one of the outlying districts of the city recorded that only 2 per cent of her children were selected during the course of her conferences with the teachers. The supervisor was aware that this figure required investigation. She did not suggest that the nurse try to reach the 20 per cent city average. This would probably only have resulted in a 20 per cent selection of children. The supervisor proposed visiting the school while a teacher-nurse conference was being held. She knew that several possible conditions might exist which explain the variation. It might be necessary to correct some conditions, as, for example, the nurse might not understand the conference procedure or the teacher might not coöperate in her share of the conference and observation of children. Perhaps the economic status of the school was high so that there were actually fewer children with problems, in which case there was no condition to correct. Or perhaps, the doctor was not assigned to the school often enough so that the nurse actually selected fewer children so her file would not be "cluttered up." If so, rescheduling of the physician's time and a different kind of selection by the nurse would tend to bring the figure "into line." But at no time was it necessary or desirable to tell the nurse that she was not near the city "average" figure.

SUMMARY

A simple system of recording activities in the school health has been developed with the point of view of helping the field worker assay his effectiveness in attaining certain stated objectives and of giving him figures on which to plan his future work. After the objectives of the service were clearly stated, the procedures used to reach these objectives were outlined. Then a simple set of clearly understandable items were devised to answer, in general, these three questions: "What work was done?" "What happened as a result of this work?" and "What work remains to be done?" These figures so collected were of great value in planning work and training staff. The principles upon which the system was devised and the method of developing it are believed to be applicable not only to school health services in any community but to other types of public health services as well.