Professional Topics

Hospital and Health System Pharmacy

#2 – "25th Percentile is Not Best Practice"

For the past four decades, hospitals have pursued some kind of "simple" data system to compare operations. My first experience was in the late '60s and early 70's with the AHA Monitrend data system. These reports were data aggregated for hospital departments by hospital sizes and/ or types. The data was reported into quartiles (25, 50, 75, 100%) with comparisons of an individual hospital to the group. The data reported for my pharmacy staffing was greater than 100% or an asterisk on the report. My boss asked the question why? I recall responding with who believes that hospital A down the street with a pharmacy staff that leaves at 4:30 pm, or a government hospital with one pharmacist per 1000 beds is better than the staffing we had to implement a decentralized clinical pharmacy service? He did not have a good answer to my question. Through the years of developing a comprehensive clinical pharmacy services program from 1967 to 1991, I was often confronted with comparative data comparisons. Eventually we developed our own data analysis system that was used to monitor staff performance and productivity.

In the mid 1980's several forces came together which resulted in benchmarking systems and the 25th percentile being labeled "best practice." These forces included: development of information technology and spread sheets; change in government compensation for hospital services per DRG; and the price competition model for hospital care in California. The pressure to reduce costs, FTE's and length of hospital stay was intense by the late 1980's and this pressure continues today. Consultants developed data bases which led to bench marking or comparative systems. Hospital administrators were looking for some simple assessment of their hospital pharmacy and comparison to other pharmacy department operations. The 25th percentile basically says if one or more hospitals in a group can operate at the 25th level then the hospitals at 26th and higher should also be able to operate at the 25th percentile. Great management decision making!

I personally sat through six different consultant proposals with the message of how many millions each company could save the hospital. Eventually, I was impacted by a consulting company from another state and which department heads were not able to meet with, who reported that my pharmacy department should have 47 FTEs cut from the 157 at that time. When the 10 step plan to reduce staffing was completed, all of the decentralized and clinical programs, drug information service, and therapeutic drug monitoring services were deleted. The medical staff did not support this kind of staffing cut in the pharmacy department.

I have talked with pharmacy directors in all regions of the US over the past 25 years and heard their stories of cuts in staffing and patient care services. The angst and stress expressed by these pharmacy directors was and is very real! The rally call by consultants and swallowed by CFO and hospital administrators was and continues to be "25th percentile is best practice." This is nonsense! There is no science or research behind the benchmarking systems. It is an aggregate of data from a group of hospitals by size and/or teaching designation, or ownership. There is no validity or reliability in the data comparisons.

Why is benchmarking so poor for pharmacy operations and services? The generalized data fails to recognize the many differences that exist between one hospital to the next to the next and so on. From experiences in visiting or providing consulting services in hospitals, I have yet to see two hospitals the same in physical facilities. Some examples to illustrate: a hospital with all facilities on one level; a hospital shaped in a U with a street running under the U section and a quarter of a mile distance from a patient room at one end to the last patient room on the other end of the same floor; a hospital with 100+ beds per floor; a hospital with 9 floors of 30 beds per floor; the pharmacy at least a quarter of a mile from the nearest patient room; a pharmacy space land locked with hallways outside two walls and the pathology department behind the other two walls. The physical facilities of the hospital has more affect on pharmacy than any other hospital department. The workload that comes into the pharmacy is variable by types of med orders, by time of day, and by when these orders get processed and received in pharmacy. While the variability in times for the prescribed orders by physicians is basically the same for lab, dietary, diagnostic, and nursing services, the pharmacy is not able to batch their work. In dietary, the meals are scheduled. In laboratory, the lab tests are batched and scheduled. For diagnostic testing, the tests are scheduled by the respective department. In pharmacy, the drug orders come when they come and are processed quickly usually in sequence when received. So hospital size, design of patient care areas by number of beds and types of patients, different drug order types, different drug dosage forms, all impact the internal processing of drug orders. The transfer of the drug orders to the pharmacy and the return of the filled drug orders back to the appropriate location in the hospital are other important variables. The allocation of pharmacist time for clinical services is affected by where the patients are located, and the types of patients per pharmacist impacts the scope and breadth of clinical drug knowledge required.

The patient care mix differs in hospitals. Patient care mix is the types of patients for example: intensive care, peds, oncology, psychiatric, ob/gyn, etc. Different patient types present different demands for the drugs required and therefore the pharmacy processing of medication orders. This was a finding from a research study in 1972-3 for 13 patient types and the amount of pharmacist and pharmacy technician time to provide services. The scope of pharmacist clinical services will also vary by patient types based on research in 1972-73 and repeated since then in many studies. Different patient types require clinical drug knowledge that is applicable to their unique pharmacotherapy needs.

The 25^{th} percentile designation comes from an arbitrary goal or target from some hospital(s) in the grouping that have data at the 25^{th} percentile level, so therefore all of the hospitals 26^{th} percentile or greater should adjust operations to fit into the 25^{th} percentile category – an arbitray designation. Again, poor management at best.

Benchmarking systems have little to non-existent pharmacist time for clinical services. Same situation applies for pharmacist time for clinical teaching of pharmacy students.

The bottom line in my judgment - benchmarking systems are not good for quality pharmacy services and patient care. As the demand and need for improvement in quality of care, in drug therapy, pharmacy benchmarking systems are in direct conflict,

The impact of these arbitrary systems on hospital patient care and pharmacy services over the past 2 decades has done more to contribute to the continuation of medication errors and adverse drug events, that any other system change in hospital operations and care. It would be

interesting to include in a law suit from a medication related error the company who sold the bench marking system to the hospital. I think an expert witness would do well with presenting a view of the negative impact of benchmarking on the quality of patient care.

Another bottom line is hospital pharmacy's failure to develop an alternative work load measurement system based on science and research. Another failure is the leadership in hospital pharmacy and pharmacy education to find some successful way to neutralize the impact of benchmarking systems from consultants. There is much work to be done for the benefit of hospital patients to develop a meaningful and defensible pharmacy workload measurement system which includes pharmacist clinical services. Getting into serious work to develop a valid system for pharmacy workload, medication systems and pharmacist clinical services, is long over due!!