OUTPATIENT WAITING TIME IN JOS UNIVERSITY TEACHING HOSPITAL

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Abstract

Problem

Long waiting time for services has been identified as a reason people avoid presenting to for care in African countries.

Design

Examination of causes for long outpatient waiting time and the effect of measures to reduce waiting time.

Setting

Outpatient department of the Jos University Teaching Hospital.

Key measures for improvement

In the initial survey, outpatients waited a mean (±SD) of 52 ± 46 minutes for collection of outpatient cards, 152 ± 115 minutes to see the doctor, 9.6 ± 9.0 minutes with the doctor, and 34 ± 32 minutes to collect medication from the pharmacy. Mean total outpatient time was 248 minutes. Long waiting times were judged to result primarily from staff shortages, misfiling of cards, doctors' delay in starting consultations, and simultaneous break times.

Strategies for change

Corrective measures implemented included additional employment and reallocation of staff, training of medical records staff, recording times on outpatient cards, and scheduling follow-up visits for less busy times.

Effects of change

In a second survey5 years later, after corrective measures were implemented, the mean (range) outpatient time spent at the hospital was 184 (7 – 390) minutes, primarily due to reduction in waiting time to see the doctor of 48 (0 – 210) minutes. The card waiting time of 53 (2 – 165) minutes was unchanged.

Lessons learned

In-house training of records staff had little long-term impact on reducing the time patients waited to collect their cards. Increased staffing and coordinating staff strength to correspond to times of peak patient load had the greatest effect in reducing outpatient waiting time. Constructive use of patient waiting time may provide greater patient satisfaction. Monitoring patient waiting time can be feasibly implemented to measure performance of health systems and provides a basis for allocating resources.

Context

The Jos University Teaching Hospital, a 550-bed facility located in central Nigeria, serves a primarily urban population of approximately one million people. The majority of patients present for primary care to the outpatient department of the hospital. An informal survey of outpatients identified long waiting time for services as their major complaint.

Outline of the problem

The unpredictability of illness coupled with a limited number of doctors to meet the demand of outpatient load leads to long waiting time for patients. In contrast to industrialized nations with telephone access and organized scheduling, most hospitals in low-income countries do not use an appointment system to provide primary care. Instead, patients present to the outpatient department and wait to see the doctor, usually on a first-come, first-serve basis. For the patient, waiting time

reflects the quality of service, and prolonged waiting time was associated with patient dissatisfaction in Ethiopia[I] and Uganda.[II] Long waiting time for maternity services was identified as one reason women avoid presenting for obstetric care in Malawi.[III] Thus, the perception of prolonged waiting time represents a barrier to providing timely care for disease at an early, more treatable stage. Reducing waiting time may increase the utilization of hospital services.[IV]

Key measures for improvement

We targeted the following waiting times for improvement: time to collect outpatient cards, time before consulting the doctor, time to collect laboratory specimens, and time to fill drug prescription.

Process of gathering information

A unit of the teaching hospital with the task of health services research investigated the time patients spend waiting in the General Outpatient Department, pharmacy, and laboratory areas of the hospital. Nursing students were recruited and paid a small stipend to record data for each patient. Monday, generally the busiest day in the outpatient department, was chosen as the day for data collection. Students were stationed at the following locations: medical records windows issuing outpatient cards, each consulting doctor's room, laboratory blood and specimen collection points, and the pharmacy. After the students synchronized their watches, data collection began at 7:30 am, when the outpatient department opened.

As each patient joined the queue to pay and collect a medical record card (the first point of entry into the system), a student gave them a data collection form and recorded the time they joined the queue. Patients were instructed to surrender their data form to one of the students prior to leaving the hospital. The patient carried the data collection form, and nursing students recorded the time the patient received their medical record card, the times the patient entered and left the consulting room with the doctor, the times they arrived at the laboratory and a specimen was collected, and the times they arrived at the pharmacy and collected their medication.

Data were entered and calculations were performed in Epi Info (CDC, Atlanta, Georgia) and Excel (Microsoft Corporation, Redmond, Washington).

Analysis and interpretation

The distribution of outpatient waiting times at various service points is displayed in Figure 1. Data was collected for a total of 175 outpatients. Patients waited a mean (±SD) of 52 ± 46 minutes for collection of outpatient cards. The waiting time was significantly shorter for new patients (43 ± 35 minutes) than for existing patients (70 ± 51 minutes), who required tracing and retrieval of their cards.

The most time (152 ± 115 minutes) was spent waiting to see the doctor. Each doctor consulted an average of 33 patients, and the mean time each patient spent with the doctor was 9.6 ± 9.0 minutes. Waiting time for submission of a laboratory specimen was relatively brief (7.2 ± 9.6 minutes). Patients waited a mean of 34 ± 32 minutes to collect their medication from the pharmacy. The mean total time at the hospital for an outpatient who consulted a doctor and collected medication was 248 minutes (approximately 4 hours).

The actual times that patients arrived at the various service points are shown in Figure 2. The majority (79%) of patients arrived at the hospital between 7:00 and 10:00 am. However, most patients were not seen by the doctor until after 9:00 am. Few patients were seen between 1:00 and 2:00 pm, when most doctors took a break. The majority of patients presented to the laboratory and the pharmacy between 10:00 am and 1:00 pm.

The results of this survey were discussed by the hospital Research and Continuing Medical Education Committee, and

recommendations were presented to the chief medical director. The following observations were made to account for long waiting times: 1) A single cashier collected payments for outpatient cards and for other services of the hospital: 2) Misfiling delayed the retrieval of cards for follow-up patients: 3) Because of delay in issuing cards, resident doctors did not begin seeing outpatients until after 10:00 am, instead using the time to complete ward rounds: 4) Most doctors took a break simultaneously (1-2 pm), resulting in a one hour interval of minimal service: and 5) Only one pharmacist served outpatients, resulting in long queues between 10:00 am and 1:00 pm.

Strategy for change

Based on the survey results, the following recommendations were made and implemented by the hospital management: 1) An additional cashier was assigned to the outpatient department with duties limited to collecting payment for outpatient cards: 2) Additional record clerks were deployed from less busy areas to assist in retrieval of cards: 3) In-service training was conducted for medical records staff with emphasis on card filing and retrieval: 4) Record clerks were instructed to write on the card the time issued to ensure patients would be seen on a first-come, first-serve basis and to provide doctors feedback about how long a patient had waited: 5) Additional doctors were employed and three were assigned to attend to patients while others were on ward rounds: 6) Break times for doctors were assigned and staggered: 7) Doctors were encouraged to schedule patient follow-up visits for the least busy days; 8)The pharmacy and laboratory reallocated some of their staff to provide additional coverage during peak times of patient attendance; and 9) Video patient education programs were introduced in the waiting area to provide opportunity for constructive use of waiting time.

Effects of change

After implementation of corrective measures, a follow-up study using identical methods was repeated 5 years later in Dec 1999 to assess changes that had occurred. We found the following mean (range) waiting times for a total of 85 outpatients: card waiting time 53 (2 – 165) minutes, consultation waiting time 48 (0 – 210) minutes, time with doctor 14 (1 – 50) minutes, time to collect laboratory specimen 65 (5 - 202 minutes), and time at pharmacy 25 (1 – 80) minutes. The mean (range) outpatient time spent at the hospital was 184 (7 – 390) minutes.

The waiting time to collect cards remained essentially unchanged, indicating that the additional training of records clerks had not reduced the retrieval time for cards. However, patient waiting time to see the doctor was reduced by more than 90 minutes. Interpretation of this observation may be limited by the fact that compared with the first survey, only about half the number of patients were consulted during the second survey. Even so, the average amount of time the doctors spent with each patient increased. The pharmacy waiting time was slightly reduced, but the laboratory waiting time markedly increased. Many of the patients presented to the laboratory early in the morning for tests ordered previously, but specimen collection did not commence until 10:00 am, accounting for the long waiting time at the laboratory. The total time spent by outpatients at the hospital was 25% lower in the second survey.

This study is limited by the long interval between the two surveys. Thus the results of the second survey may not reflect the direct effect of changes implemented. Changes in other unmeasured variables may have also influenced the change in waiting times. Personnel at the service points had changed by the time of the second survey. The lower number of outpatients at the second survey would by itself be expected to reduce patient waiting

times. Evaluation of waiting times over a longer time interval would have been more representative of the true situation, but due to funding limitations, only one day was allotted for each survey.

Next steps

This study highlights how data on basic hospital services can be collected and changes implemented based on the results. Allocation of personnel, training programs, and maximizing opportunities for patient education were all guided by the research data. A similar quality assurance approach in Uganda eliminated long delays and resulted in a 28% increase in utilization of hospital services. [ii]

Little has been reported about the waiting time of patients in developing countries. Lack of telephones makes scheduling of outpatient visits problematic, except for follow-ups. Thus, some waiting time for outpatients is unavoidable. However, patients may not object to waiting when useful medical education is provided.[iv,v]

In conclusion, monitoring of patient waiting time can be feasibly implemented as a basic measure of performance and provides a basis for allocating resources. However, the commitment of management to invest in quality improvement underpins success.

Acknowledgments

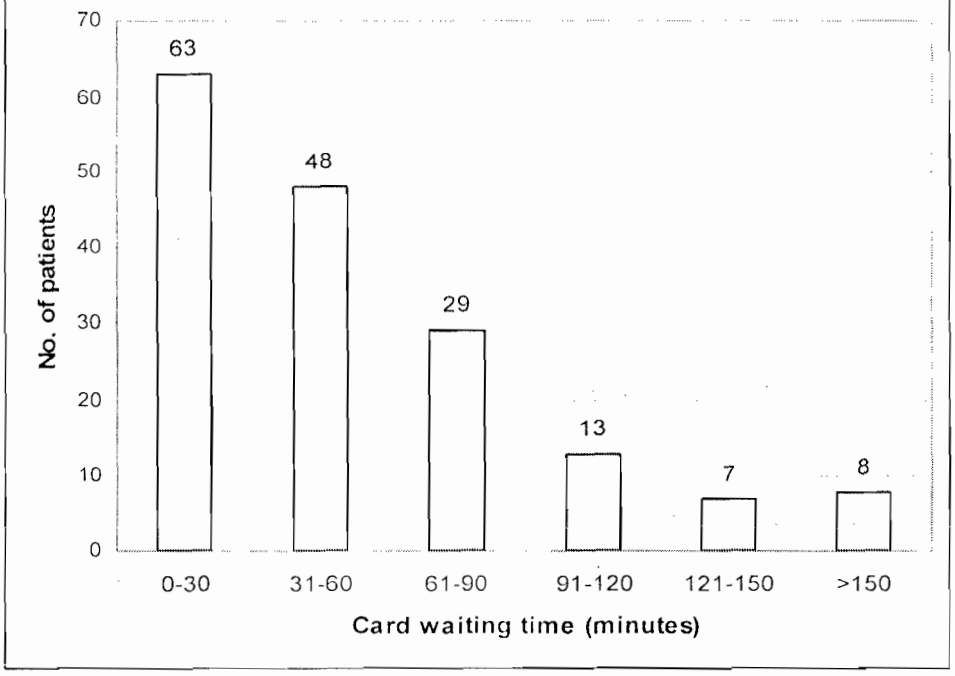
I am grateful to the nursing students and staff of the Research and Continuing Medical Education Unit who collected data, to the chief medical directors who endorsed the surveys, and for the assistance of Mr. Isa Mailafiya in data entry and analysis.

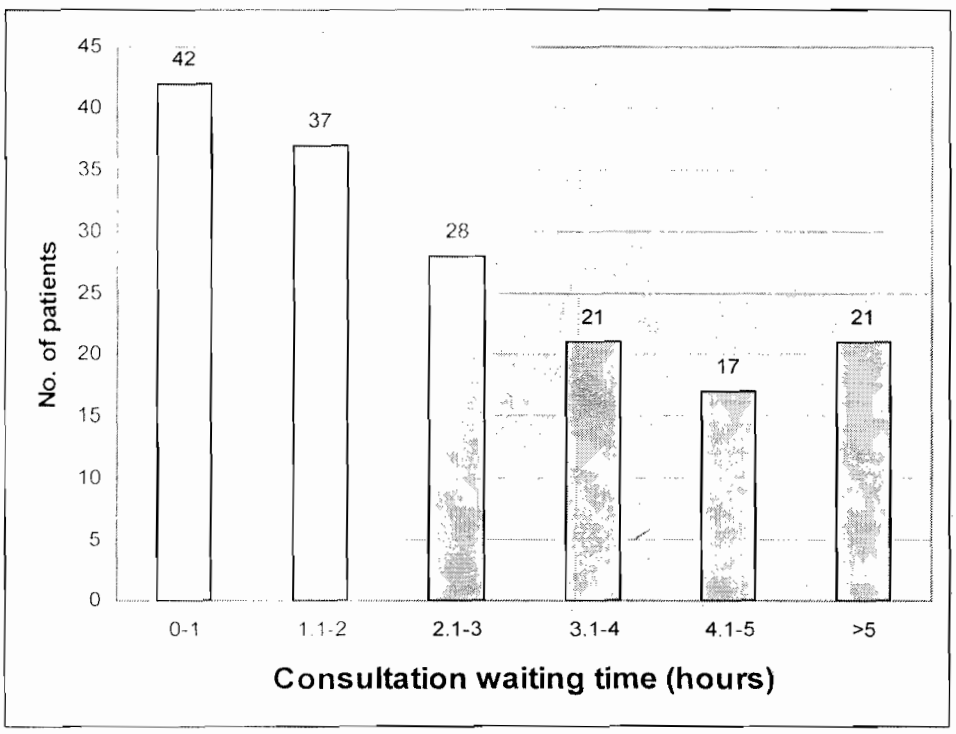
Figure Legends

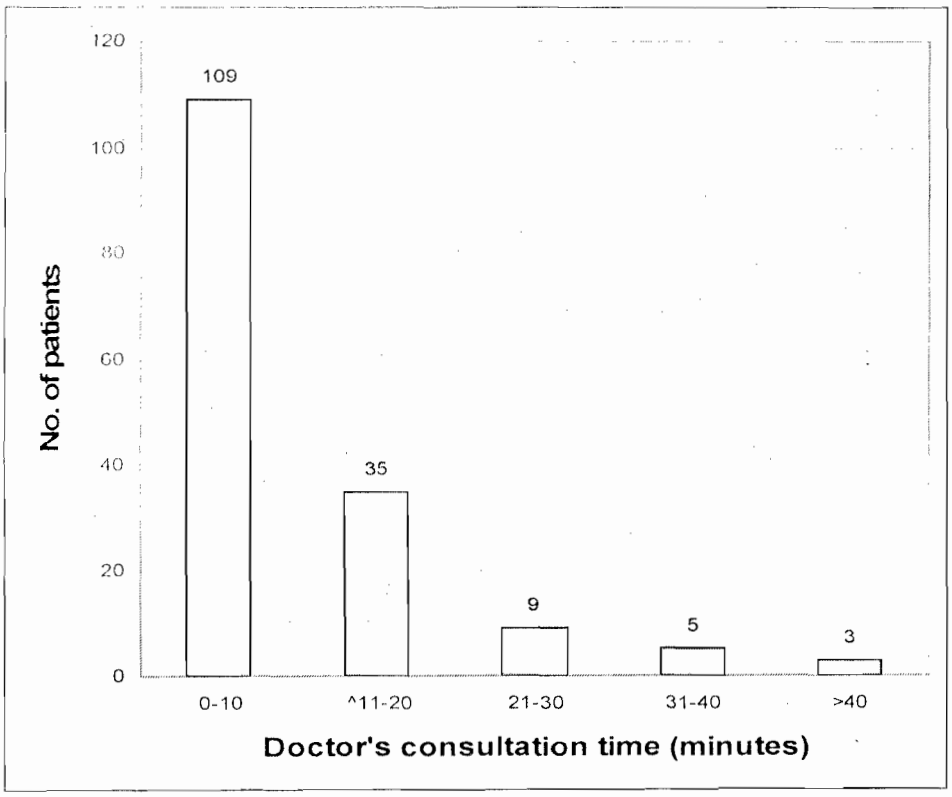
Figure 1: Outpatient Waiting Times

Figure 2: Arrival times.

Figure 1: Outpatient Waiting Time



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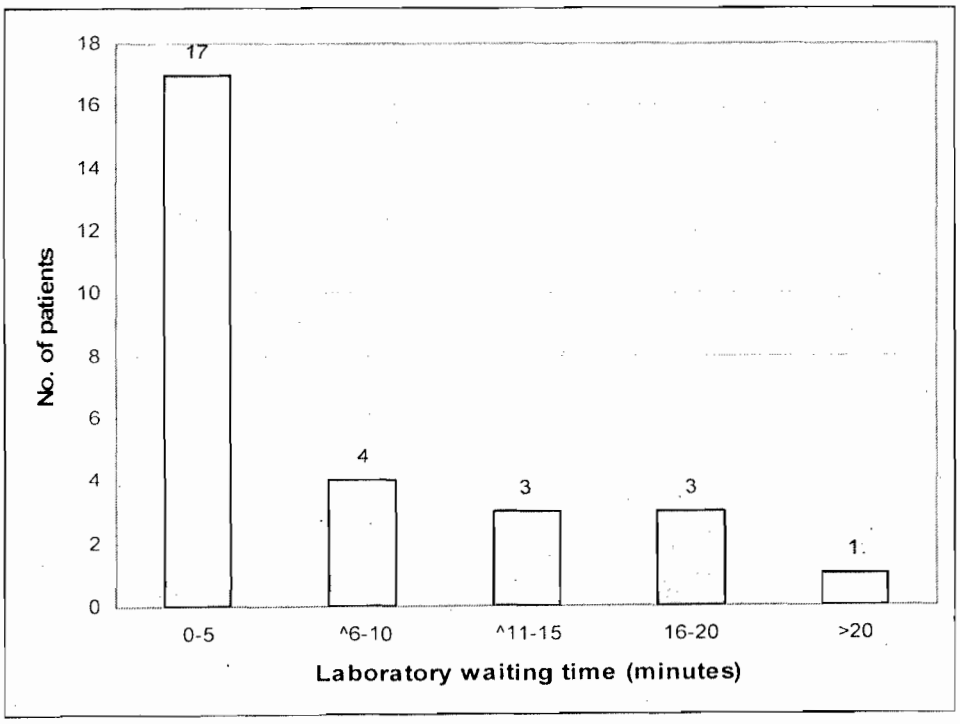
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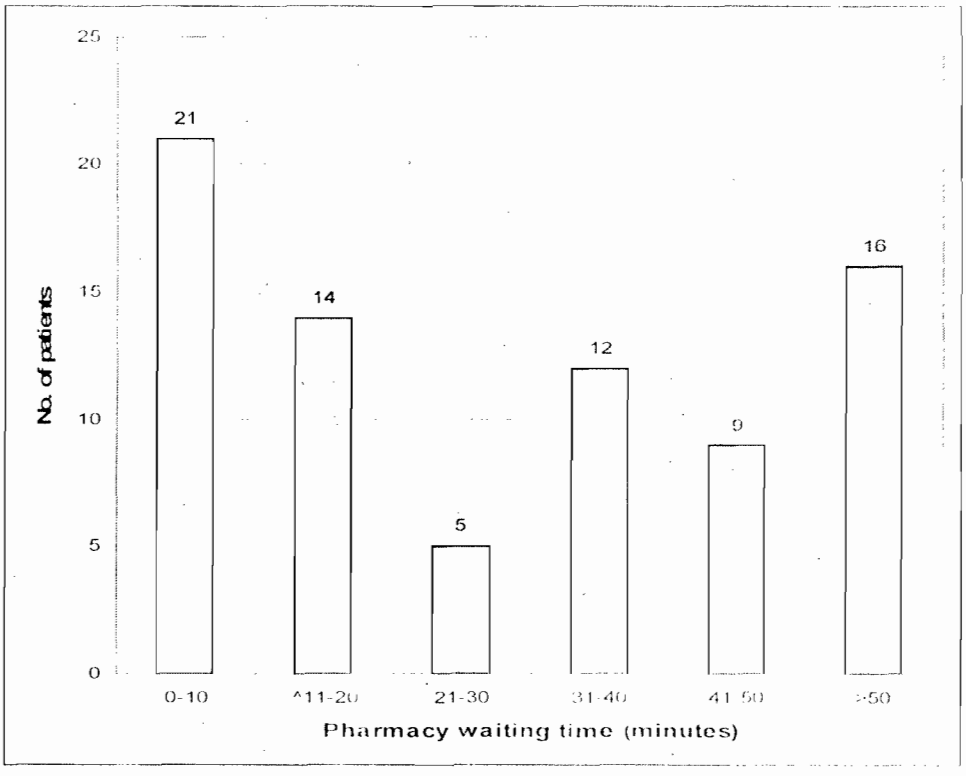
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41-50
>50
Pharmacy waiting time (minutes)