Percentage of Verbal Orders

Monitoring the percentage of verbal orders allows organizations to measure the use of verbal ordering over time and whether that use is trending downward with the implementation of health IT, most commonly, computerized provider order entry (CPOE). Such monitoring is also recommended by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO).

Measure Category: Clinical Process

Quality Domain: Patient Safety

Current Findings in the Literature: Verbal orders are those that are conveyed as oral, spoken communication between senders and receivers face to face, by telephone, or using another auditory device.[1] They have become a target for hospitals seeking to improve patient safety practices and prevent medication errors, as orders can be misunderstood, misinterpreted, or miswritten.[2] Recently, in an effort to increase patient safety, JCAHO developed a standard that requires verbal orders to be recorded and "read back" to the authorized provider.[3]

Although robust published literature on CPOE exists, the majority of the research examines clinical outcomes (e.g., medication errors) and does not publish rates of electronic and verbal ordering. One study examined and compared the rates of verbal orders pre- and post-CPOE implementation and found a significant decrease in the rates of verbal orders (from 22 to 10 percent) and unsigned verbal orders (from 43 to 9 percent) between the period before CPOE implementation and 21 months after CPOE implementation (p=0.0001).[4] A study from 1994 that focused on medication errors and not type of orders but did include rates of order type found that 23 percent of total orders were verbal, with both handwritten and electronic orders each accounting for 38 percent of the orders.[5]

Source of Data for the Measure:
Preimplementation—chart review of paper records. Postimplementation—medical record or pharmacy record logs.

Methodology for Measurement

Definitions

A definition of verbal orders comes from work by Wakefield and colleagues:[6]

> Verbal orders include all telephone and face-to-face patient care orders that (1) were communicated verbally by the ordering provider (e.g., physician, physician assistant [PA], or advanced practice nurse [APN]), (2) required transcription by the proxy (e.g., nurse or unit clerk) receiving the order, and (3) required a provider signature at a subsequent time to validate the order.

Verbal orders can include those related to medications, diagnostic testing, other treatments, and dietary changes.

Study Design

Measure the percentage of verbal orders at set points over a specified time period, such as weekly or monthly, and use this information to compare changes in verbal use over time. The ultimate goal is to limit verbal orders to urgent situations only. Evaluators should periodically monitor their organizations' progress toward that goal.

Analysis Considerations

Several issues should be addressed before developing a statistical plan:

1. Your plan should specify whether an unexecuted canceled order will be included in the analysis.
2. If evaluators cannot count all verbal orders, your plan must consider what sampling frame will be used, i.e., what percentage of verbal orders is available for counting.
3. A simple chart or graph that displays the decrease in verbal orders over time is an effective way to communicate this information to stakeholders.
4. Your data collection and analysis plan should be based on sound methodology. To attain valid, robust results, consider using the input of a trained statistician to determine sample size and appropriate statistical techniques. It is not uncommon to begin analyzing data, only to find the original statistical plan was flawed, leaving you with data that is inadequate for analysis.

Relative Cost: Low: if the medical records department or pharmacy is already collecting the data. However, this may require manual chart reviews, which can be expensive.

Potential Risks: Evaluation, particularly for preimplemetation baseline, will depend on whether orders are documented clearly as verbal orders in the medical or pharmacy record. Any manual chart review is resource intensive in terms of space, time, and costs. Consider whether these resources are available before conducting any manual chart review.

References

1. The National Coordinating Council for Medication Error Reporting and Prevention (NCC MERP) http://www.nccmerp.org/council/council2001 02 20.html
2. ECRI. Improving the safety of telephone or verbal orders. Patient Saf Advis 2006;3(2):1,3 7. http://www.psa.state.pa.us/psa/lib/psa/advisories /v3n2june2006/junevol 3 no 2 article b safety of telphone orders.pdf. Accessed June 24, 2008.
3. Joint Commission of Accreditation of Healthcare Organizations. 2004 hospitals' national patient safety goals. Available at: http://www.jointcommission.org/PatientSafety/N ationalPatientSafetyGoals/04 npsgs.htm Accessed June 24, 2008.
4. Kaplan JM, Ancheta R, Jacobs BR. Clinical Informatics Outcomes Research Group. Inpatient verbal orders and the impact of computerized provider order entry. J Pediatr 2006;149:461 7.
5. West DW, Levine S, Magram G, et al. Pediatric medication order error rates related to the mode of order transmission. Arch Pediatr Adolesc Med 1994;148:1322 6.
6. Wakefield DS, Ward MM, Groath D, et al. Complexity of medication related verbal orders. Am J Med Qual 2008; 23:7 17.

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