

## ABSTRAK

### HUBUNGAN TINGKAT PENGETAHUAN ATLM TERHADAP PENERAPAN PEMANTAPAN MUTU INTERNAL PRA-ANALITIK PADA PEMERIKSAAN GLUKOSA DARAH PUASA

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Tahap pra-analitik merupakan titik kendali yang paling menentukan ketepatan hasil pemeriksaan glukosa darah puasa. Dikarenakan sebagian besar kesalahan laboratorium berakar pada proses pra-analitik, penerapan pemantapan mutu internal (PMI) pada tahap ini menuntut kompetensi dan ketelitian Analisis Teknologi Laboratorium Medik (ATLM) sebagai pelaksana utama. Penelitian ini bertujuan menggambarkan tingkat pengetahuan ATLM dan penerapan PMI pra-analitik pemeriksaan glukosa darah puasa, sekaligus menguji hubungan diantara keduanya di Laboratorium Patologi Klinik RSUD Wangaya Kota Denpasar. Penelitian menggunakan desain analitik dengan pendekatan cross-sectional pada 19 ATLM. Tingkat pengetahuan diukur melalui kuesioner berisi 20 butir pertanyaan, sedangkan penerapan PMI pra-analitik dinilai menggunakan lembar observasi yang memotret pelaksanaan proses pra-analitik secara langsung. Analisis hubungan dilakukan dengan Fisher's Exact Test karena terdapat sel dengan expected count < 5. Hasil menunjukkan mayoritas ATLM memiliki pengetahuan kategori baik (52,6%), dan penerapan PMI pra-analitik juga didominasi kategori baik (57,9%). Uji Fisher mengonfirmasi adanya hubungan yang bermakna antara tingkat pengetahuan dan penerapan PMI pra-analitik ( $p < 0,001$ ), dengan kekuatan asosiasi yang sangat kuat ( $\Phi = 0,899$ ). Temuan ini menegaskan bahwa penguatan pengetahuan ATLM merupakan strategi kunci untuk meningkatkan konsistensi dan mutu penerapan PMI pra-analitik pada pemeriksaan glukosa darah puasa.

**Kata kunci:** glukosa darah puasa, PMI, pra-analitik, tingkat pengetahuan.

## ABSTRACT

### **CORRELATION BETWEEN MEDICAL LABORATORY TECHNOLOGISTS' KNOWLEDGE LEVEL AND THE APPLICATION OF INTERNAL QUALITY CONTROL IN THE PRE-ANALYTICAL STAGE OF FASTING BLOOD GLUCOSE TESTING.**

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The pre-analytical phase represents the most critical control point in determining the accuracy of fasting blood glucose test results. As the majority of laboratory errors originate during the pre-analytical process, the implementation of internal quality control (IQC) at this stage requires a high level of competence and precision from Medical Laboratory Technologists (MLTs) as the primary practitioners. This study aimed to describe the level of knowledge among MLTs and the extent of pre-analytical IQC implementation in fasting blood glucose testing, as well as to examine the strength of the association between these two variables at the Clinical Pathology Laboratory of RSUD Wangaya, Denpasar. An analytical cross-sectional design was employed involving 19 MLTs. Knowledge levels were assessed using a 20-item questionnaire, while the implementation of pre-analytical IQC was evaluated through direct observation of pre-analytical procedures. The association between variables was analyzed using Fisher's Exact Test due to the presence of cells with an expected count of less than 5. The results indicated that the majority of MLTs had a good level of knowledge (52.6%), and the implementation of pre-analytical IQC was also predominantly classified as good (57.9%). Fisher's Exact Test confirmed a statistically significant association between knowledge level and the implementation of pre-analytical IQC ( $p < 0.001$ ), with a very strong strength of association ( $\Phi = 0.899$ ). These findings underscore that strengthening MLTs' knowledge is a key strategy for improving the consistency and quality of pre-analytical IQC implementation in fasting blood glucose testing.

**Keywords:** fasting blood glucose, internal quality control, knowledge level, pre-analytical phase.