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**DECISION SUPPORT SYSTEM FOR THE MANAGEMENT OF  
PATIENTS WITH COMMUNITY ACQUIRED PNEUMONIA**

**A PROJECT REPORT PRESENTED BY  
D. I. K. SOLANGAARACHCHI**

to the Board of Study in Statistics & Computer Science of the

**POSTGRADUATE INSTITUTE OF SCIENCE**

*in partial fulfilment of the requirement  
for the award of the degree of*

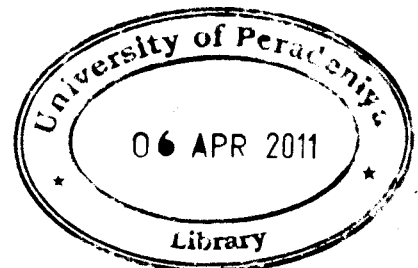
**MASTER OF SCIENCE IN COMPUTER SCIENCE**

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# **DECISION SUPPORT SYSTEM FOR THE MANAGEMENT OF PATIENTS WITH COMMUNITY ACQUIRED PNEUMONIA**

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This report presents a Decision Support System for the management of patients with Community Acquired Pneumonia (CAP) and it can mainly be used as tool by the primary-care management decisions in pneumonia for early decision making.

Some decision needs to be taken within hours or minutes depending on the patient's condition. Furthermore doctor at first contact may not have the relevant expertise on the specific treatment. This system assists doctors to investigate and manage a patient with CAP, complying with international standards. Major functions of the proposed system include;

1. Record patient demographic details
2. Make a clinical diagnosis of CAP
3. Basic risk assessment of CAP
4. Full risk assessment of CAP
5. Assessment for possible aetiological agent of CAP
6. Decide on the management plan

System is flexible enough to handle any of these situations without going through all the steps. This increases effectiveness of the system in practical use.

Hypothetical test cases are used as the testing method. Testing is successful for the hypothetical test data. It is difficult to test the system using recorded data since some essential information needed in the assessment is unavailable at the moment.

System also maintains a database which can be used for further research purposes. Further this system can also be used as a teaching tool for medical students.