# HULA: HABITUAL URINALYSIS IS A LABORIOUS ACTIVITY

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# CERTIFICATE OF AUTHORSHIP / ORIGINALITY

I certify that the work in this thesis has not previously been submitted for a degree nor has it been submitted as part of the requirements except as fully acknowledged within the text.

I also certify that the thesis is written by me. Any help that I have received in my research work and the preparation of the thesis itself has been acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

**Signature of Candidate**

Production Note:
Signature removed prior to publication.

## DEDICATION

I wish to dedicate this thesis to my mother who died on 28th Jan 1997. Mum, your unconditional love, encouragement, and constant support of all of my endeavours and those of my brothers and sister, still fills me with inspiration and confidence to always embrace a challenge. I thank you.

# ACKNOWLEDGEMENTS

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## ABBREVIATIONS

| | |
|---|---|
| **ADIPS** | Australasian Diabetes in Pregnancy Society |
| **ANC** | Antenatal Clinic |
| **ASSHP** | Australasian Society into the Study of Hypertension in Pregnancy |
| **BC** | Birth Centre |
| **BP** | Blood Pressure |
| **DAU** | Day Assessment Unit |
| **GDM** | Gestational Diabetes Mellitus |
| **GH** | Gestational Hypertension |
| **GP** | General Practitioner |
| **GTT** | Glucose Tolerance Test |
| **IUGR** | Intrauterine Growth Restriction |
| **ISSHP** | International Society into the Study of Hypertension in Pregnancy |
| **MSU** | Mid Stream Urine |
| **NHMRC** | National Health and Medical Research Council |
| **PC** | Protein/Creatinine ratio |
| **RCT** | Randomised Controlled Trial |
| **PE** | Pre-eclampsia |
| **SGA** | Small for Gestational Age |
| **SLE** | Systemic Lupus Erythematous |
| **STOMP** | St. George Outreach Maternity Program |
| **UTI** | Urinary Tract Infection |
| **WHO** | World Health Organization |

## ABSTRACT

**Objectives:** The objective was to determine whether routine urinalysis in the antenatal period facilitates diagnosis of pre-eclampsia. The research question was: can routine urinalysis during pregnancy be discontinued in women with normal results of dipstick urinalysis and microscopy at the first antenatal visit?

**Design:** A prospective observational study was undertaken.

**Setting:** A metropolitan public hospital and a private hospital in Sydney (NSW).

**Participants:** One thousand women were enrolled at their first antenatal visit (March to November 1999), and 913 completed the study.

**Research Variables:** The primary outcome was a diagnosis of hypertension (gestational hypertension, pre-eclampsia, or pre-eclampsia superimposed on chronic hypertension). Other variables were proteinuria, haematuria, parity, past history of pre-eclampsia, renal disease, diabetes mellitus and multiple pregnancy.

**Results:** Thirty-five women had dipstick proteinuria at their first antenatal visit. In 25 (25/35) of these women, further dipstick proteinuria was detected during pregnancy, and two (2/35) were diagnosed with pre-eclampsia. Of the 867 without dipstick proteinuria at the first visit, 338 (39%) had dipstick proteinuria ($\geq$1+) at some time during pregnancy. Only six women developed proteinuria before the onset of hypertension. Women who had an abnormal result of a midstream urine test at their first visit, were more likely to have a urinary tract infection diagnosed during pregnancy than women with a normal result, however, the numbers were small.

**Conclusion:** This study suggests that urinalysis can be omitted from the routine antenatal care of 'low risk' women, provided that urinalysis and microscopy is conducted on a carefully collected mid stream specimen of urine at the booking visit.

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