

Chapter I

An Introduction to Women's Health and Informatics

Peter Stone

FRANZCOG, CMFM, The University of Auckland, New Zealand

ABSTRACT

Improving women's health is a vital task for the world. The consequences of obstetric and gynecological disease are serious both for the women involved, their families, and communities. This introductory chapter introduces the reader to the field of Obstetrics and Gynecology. The continuum of pregnancy from conception to childbirth, and the postnatal period are discussed. There is coverage of the pathology that can arise within the female reproductive tract. Data collection and use has a long history in this area. In order to improve care, evidence-based medicine has been strongly emphasized and women's health has often led the way. Audit of practice, governance, and quality reviews are all areas where electronic information systems are assisting with improvements. Increasing use of e-health technologies are a major influence on the improvement

INTRODUCTION

Health informatics in Reproduction has the potential to provide the tools to lead a new revolution in the outcomes for women and their babies in the 21st century.

This may seem a bold statement but for those working in this field, it is improving outcomes in Reproductive Health that is the rationale for striving to use new ways to address health issues and indeed is the reason for this book.

The later chapters in this book will cover key topics in detail but the purpose of this chapter is to provide a context for further discussion and to challenge readers to consider the future of reproductive health and how new technologies may play a part in this future.

Societies tend to take reproduction for granted until the individual presents with a problem such as infertility, unwanted pregnancy, a sexually transmitted disease or symptoms from diseases in the genital tract. Apart from advances in science, it

can be argued that progress in achieving healthier outcomes in reproductive health will require societies to refocus on valuing reproduction .

This includes not only the prevention of disease but encouraging sexual health, endeavouring to have women entering pregnancy in the best possible health, safe childbirth and valuing motherhood and childrearing. Clearly the ramifications of such statement are huge , but many of the successes in past improvements in obstetric outcomes have come as much from changed social circumstances and education as from strictly medical advances.

HISTORICAL SETTING

The improvement in maternal mortality in the western world from the 1900's has been well reviewed by Loudon (Loudon, 2000) and illustrates the impact of general health measures, new developments such as the discovery of antibiotics and the developments in blood transfusion and inversely, the adverse effects of "obstetric" or medical interventions in normal childbirth. This latter is a salutary lesson and the importance of evidence based practice is discussed later

The general measures built on knowledge previously acquired such as the description by Semmelweis in 1847 of puerperal fever and how its incidence could be reduced by handwashing saving many lives. Medical advances specifically in Obstetrics did play a role such as the use of ergot derivatives to prevent postpartum haemorrhage that J Chassar Moir pioneered in the 1930's.

Modern anaesthesia, antibiotics, blood transfusion, discovery of ecobolics, prostaglandins, structured data collection and audit, evidence based practice, new contraceptive techniques, safe abortion and ultrasound have all contributed to a revolution in the care of women and their babies, though not in all parts of the world.

DEFINING OBSTETRICS AND GYNECOLOGY

The scope of the disciplines being discussed need to be defined.

Obstetrics and gynecology and more recently "women's health" are terms to describe the science and practice of clinical care in human reproduction.

A rather narrow view would be that

- Obstetrics-the branch of medicine dealing with pregnancy, labour, delivery and the puerperium (the period from birth to the time when the changes of pregnancy have resolved- arbitrarily said to be 6 weeks)
- Gynecology-the branch of medicine dealing with diseases of the genital tract in women
- Women's health is all this in a modern context which includes the woman and family ie health is more than just the absence of disease.

The scope of these labels includes

- Physiology of reproduction
- Maternal fetal medicine
- Antenatal care, labor and birth
- Postnatal care, mother and baby
- Endocrinology of reproduction and the menstrual cycle
- Infertility - male and female
- Sexuality and womanhood
- Oncology
- Ethics "sociology" legal issues
- and many areas arising from the above –now beyond the scope of one person-hence development of "subspecialities"

From this list it is apparent that obstetrics and gynecology and women's health has a very wide

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