



**Title:** Diagnostic Ultrasound in Primary Care

**Agency:** SMM, The Norwegian Center for Health Technology Assessment

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## **Aim:**

The development of small, diagnostic ultrasound devices will most probably lead to increased use among general practitioners. This raises questions of professional competence and organization, which have given cause for this early warning report.

## **Results and Conclusions:**

Literature addressing the use of ultrasound in primary health care is sparse. Only a few studies mention the clinical significance for the patient. Several studies show that when general practitioners have access to the equipment, the use of ultrasound increases more than with the usual practice of direct referrals to the secondary health service. The widest area of use is prenatal care. Some clinical examinations concern maxillar sinusitis, abdominal pain, and stone formation in the gallbladder and kidneys.

- An abundance of literature addresses the use of diagnostic ultrasound in specialist health services (incl. hospitals). The transfer value is uncertain regarding experiences from the specialist to the primary care service.
- The report raises questions regarding; 1) the use of ultrasound in a population where the prevalence of a disease is low, 2) problems concerning false positive and false negative findings related to ultrasound examinations, and 3) consequences for the specialist health services (due to increased referrals because of false positive ultrasound examinations and uncertain results, or fewer referrals).
- The result of the examination depends on the examiner's education and experience.
- If general practitioners are to use ultrasound in their practice, it is essential to look into basic and further medical education, accreditation, and re-certification
- The use of ultrasound in primary care services will entail increased costs, depending on the number of general practitioners who use the method. The cost-effectiveness is not known.

## **Methods:**

SMM based the present work on the Spanish AETS report: "Ultrasonography in primary health care - systematic review 1998". An updated search of the literature for 1998-2000 was added, together with empirical data from the Norwegian health services.

## **Further research/reviews required:**

Clinical studies are needed on the diagnostic value and clinical effect (including the cost-effectiveness) of ultrasonography use in general health care.