

# Vård – Doktorn kan komma!

Anders Sylvan

# Vård på distans – Hjärtdoktorn kan komma!

# Andfådd på älgjakten

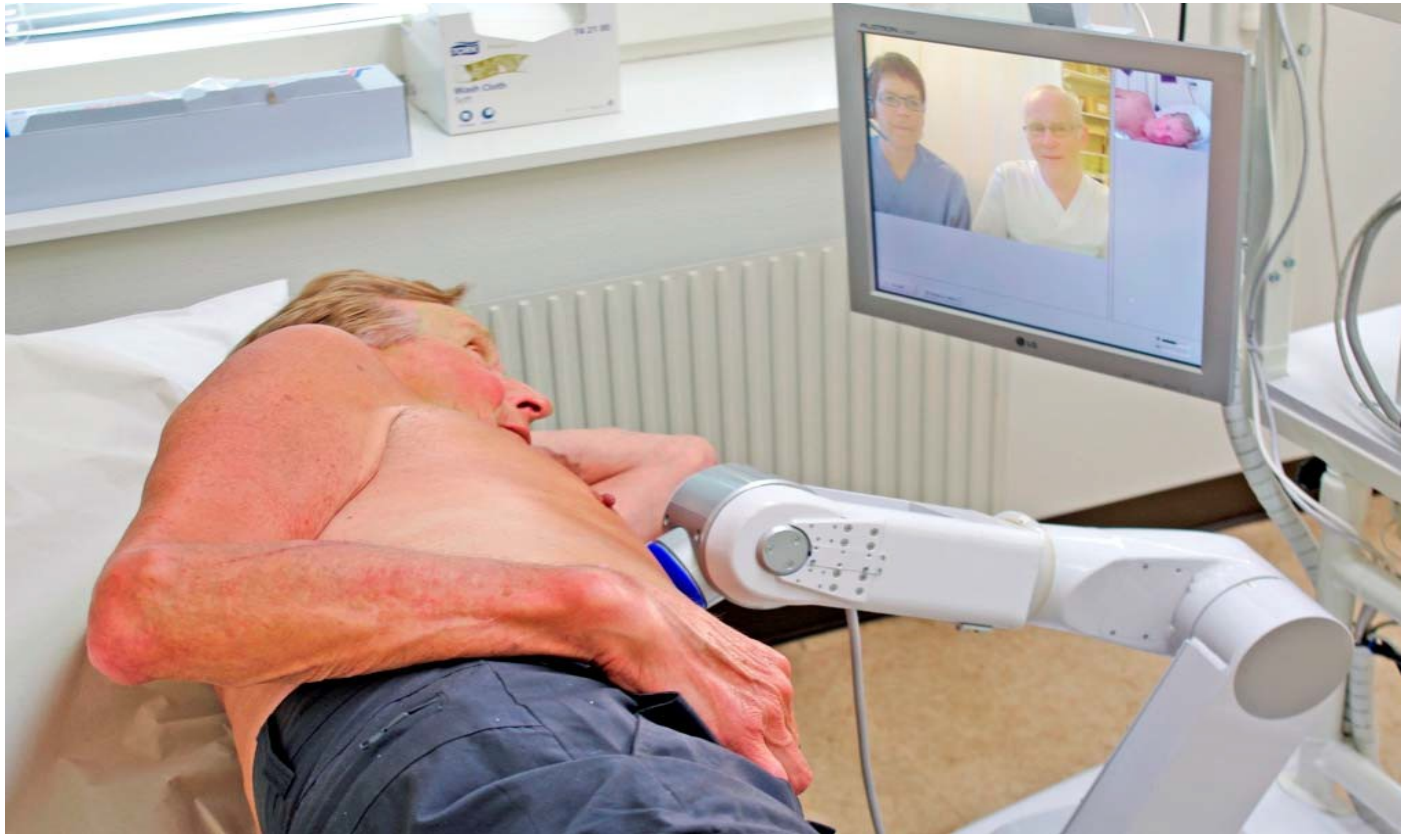




# Storumans hälsocentral

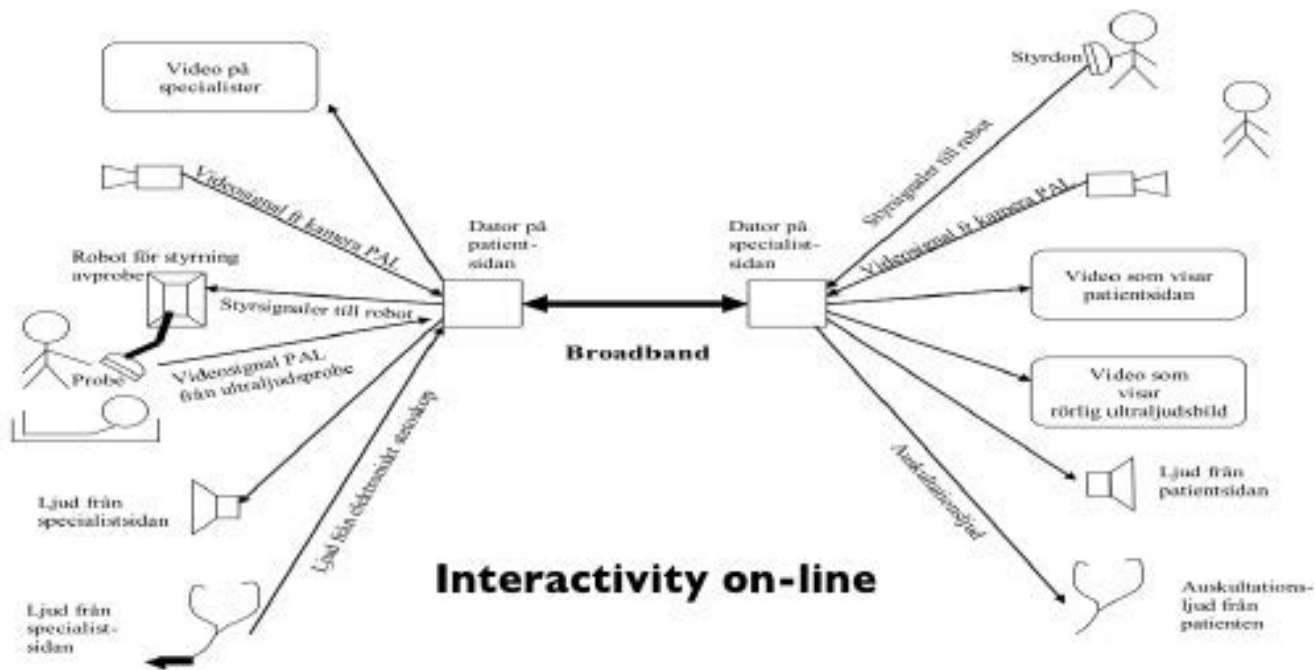


# Robotassisterad hjärtultraljudundersökning





# Echocardiography on distance



**Patient side**



**Specialist side**





# Många kanaler kräver bredare bredband





# Varför?

## Bättre tillgänglighet

## Minskad restid

## Minskade kostnader

## Jämlik vård

JACC: CARDIOVASCULAR IMAGING  
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### CONCEPTS

CONCEPTS ON THE VERGE OF TRANSLATION

## Robot-Assisted Remote Echocardiographic Examination and Teleconsultation

### A Randomized Comparison of Time to Diagnosis With Standard of Care Referral Approach

Kurt Boman, MD, PhD,\* Mona Olofsson, BS,† Peter Berggren, MD,‡ Partho P. Sengupta, MD,§ Jagat Narula, MD, PhD¶

**ABSTRACT**

The strategy ultracardiographic consultation in addition to the robot-assisted remote echocardiography at a distance was tested in a prospective, randomized controlled trial to evaluate its feasibility and to derive its clinical value in a rural area. The present study involved primary healthcare centers in the north of Sweden, 120 miles from the hospital where the echo-examinations and the cardiology teleconsultations were performed using a remote site. Remote patients were randomized to remote consultation and imaging, and 25 to the standard of care consultation. The total process time was significantly reduced in the former arm (median 174 days vs 25.5 days,  $P < 0.001$ ). The time from randomization until receiving a specialist consultation was also significantly reduced ( $P < 0.001$ ). The patients' satisfaction was measured. They considered that the remote consultation strategy offered an increased quality of diagnosis and the likelihood of receiving better management compared with the standard of care at the primary healthcare center. *J Am Coll Cardiol Img* 2014;7:799-802. © 2014 by the American College of Cardiology Foundation.

**T**he demographic profile in most Western countries is changing, with an increasing number of elderly people and increased requirements for advanced diagnostic and therapeutic medical facilities. Primary healthcare centers (PHCs) and smaller hospitals usually lack such facilities and do not always provide the specialized services. In addition, the geographic dispersion leads to geographic population areas of long distances without possibilities for transfer of the sick to the advanced care centers. The wide availability of the information technology and wireless transmission has allowed development of electronic health (eHealth) solutions to overcome these shortcomings but only in developed nations but also in low- and middle-income countries. The use of telemedicine diagnosis facilities at a distance (e.g., ultrasonical, long distance video-assisted consultations, management support systems) potentially gained attention and interest in being evaluated for superior healthcare delivery.

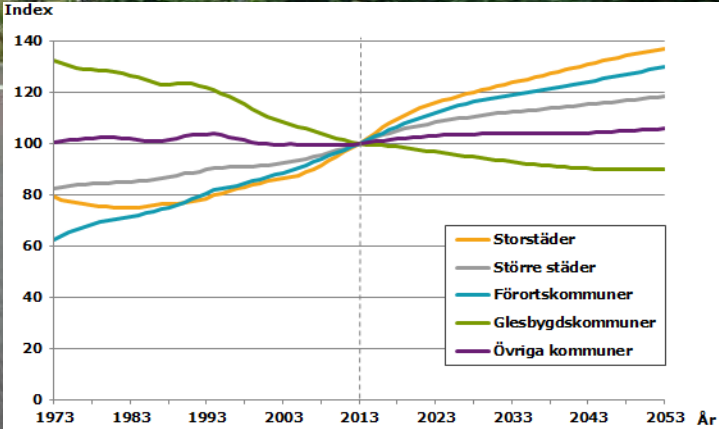
To determine the feasibility of providing the imaging consultation with other medical centers

From the \*Research Unit, Department of Medicine, Malmö, †Department of Public Health and Clinical Medicine, Umeå University, Umeå, Sweden; ‡Primary Health Care Center, Sotenäs, §Department of Public Health and Clinical Medicine, Umeå University, Umeå, Sweden; and the ¶Jagat Narula School of Medicine at Mount Sinai, New York, New York. Dr. Boman and Mrs. Olofsson have a consultancy agreement with the robot manufacturer IMAGE Robotics Sweden AB, Södertälje, Sweden. Dr. Narula has received research grants from GE Healthcare and Philips Healthcare in the form of equipment to the institutions. All other authors have reported that they have no relationships relevant to the contents of this paper to disclose. The CARESTA concept was awarded on April 9, 2014, the first prize at the VITALIS Nordic Congress on e-Health. Sheriff Naguib, MD, served as the Guest Editor for this article.

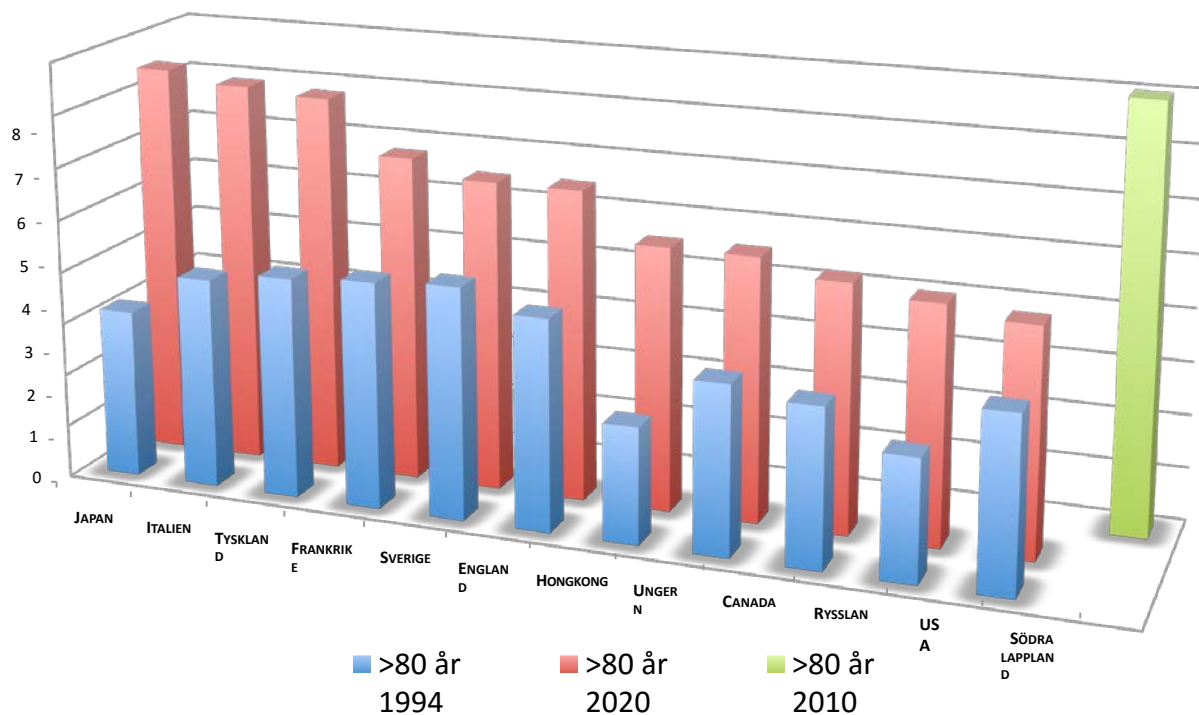
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# Glesbygdsmedicinsk centrum (GMC)





# Demografiskt försprång





# Rural medicine goes to town...

