



# Evaluating case and disease management strategies in Sweden

Presentation at Forum for Health Policy

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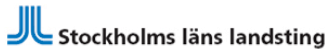
30th May 2013

# Summary

- 1% of the population within the county councils accounts for 30% of total health care spending. Many of these patients have frequent ER visits.
- Our results from large-scale RCTs indicate that a nurse-driven case management contact program delivered primarily through planned telephone support can increase quality of life and substantially decrease health care consumption and costs if the right patients are targeted.
- Health care organizations can expect high return (in terms of improved quality of life for patients and reduced health care costs) of strategies that support patients with frequent ER visits and high per capita health care consumption/costs.
- ***In our presentation May 30 we will describe how we have developed, a for Sweden new patient-centric intervention, and taken it from paper to system-wide use in an controlled scale-up within five County Councils.***
- ***We believe that this is a good and encouraging example that improvements within healthcare can both be achieved quickly and in a highly measurable manner.***

# Today's presentation will focus on new strategies to improve quality and reduce costs for high health care consumption patients

## A long term collaboration between counties, academia and Health Navigator...



### *Five county councils engaged to date*

- Financer and owner of the projects
- Initiated and supported by the political leadership and senior administratives

### *Karolinska Institutet and hospitals*

- All or majority of emergency care hospitals participate
- Senior epidemiologists advise and publish results in peer reviewed journals and at meetings and conferences

### *Health Navigator*

- Develops and delivers the actual intervention program for more than 5000 patients within four counties
- Provides tools, expert nurses and all project leadership

# Who we are and our role in the collaboration with the Stockholm County Council

## Today's presentors:



*Joachim Werr, CEO  
Health Navigator*

- **Initiator of the collaboration with the county councils**
- MD, PhD Physiology, Karolinska Institutet
- Management consultant, McKinsey&Co



*Jonas Lundberg, Partner  
Health Navigator*

- **Contacts with academia, publishing of results**
- M.Sc. Biomedicine  
PhD Medical Management, Karolinska Institutet
- Management consultant, McKinsey&Co
- Project manager, Strategy Development Office, KI



## **Our team combines analytic, strategic and medical competence**

- 75 employees in total
  - 60 licensed health-care professionals
  - 6 PhD
  - 7 M.Sc. in business administration and finance with health care economics competence
  - 7 M.Sc. in engineering with specific competence in biostatistics

# The County Councils are facing a challenge to manage the population segment with high resource utilization

- 1% of the population account for approx. 30% of the total health care spending in the Counties. These care demanding patients have some characteristics in common:
  - 8-12 different diagnoses
  - 65-100 care contacts per year
  - One hospital admission every third month, often unplanned
  - Very low self-rated quality of life (SF-36)
  - Large needs for support, care coordination and coaching
- 65% of these patients are younger than 65 years old
- The group of care demanding patients is not static – only 15% of the patients belong to the segment also the next year
- International experience has shown that managed care can improve the care for this segment of the population



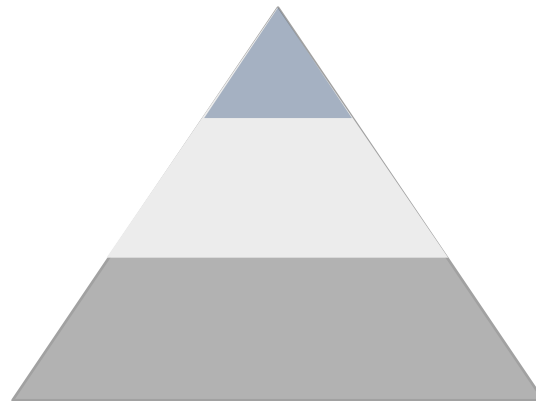
# We have further developed and customized internationally validated models of case- and disease management

## Background

- A small part of the population accounts for the majority of healthcare spending
- It is possible to predict who will have large healthcare needs in the near future
- Interventions targeted at this population prevent unnecessary healthcare consumption and give large returns on investment (both financially and in terms of quality)

## Objective:

- To identify and pro-actively support risk populations with the purpose of improving health delivery efficiency and increasing the quality of life for these patients



*"Case management"*

– Most healthcare intensive patient groups

*"Disease management"*

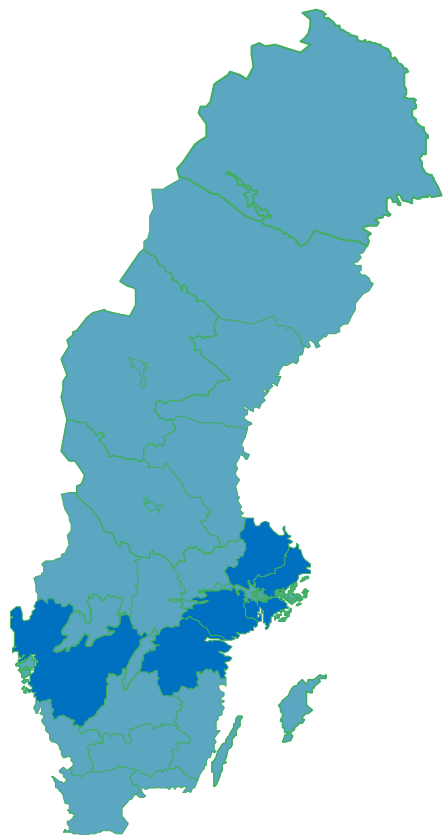
– Most healthcare intensive diseases

*"Population health management"*

– Risk groups in the population

Source: National Registry of Health Care Quality (SALAR), National Registry of Asthma, Health Economics of Depression - Sobocki (2006), National registry of Diabetes, National registry of CHF, National Registry of Stroke, Swedish National Institute of Public Health, Health Navigator analysis

# Stockholm is leading a national trend of evaluating case and disease management models and exchanges results and insights with a growing number of other County Councils



## **Stockholm**

- Started in June, 2010
- Currently includes 4 target groups in 4 RCTs
- 5000 patients with a case management nurse

## **Östergötland**

- Started in October, 2011
- Currently includes 3 target groups in 3 RCTs
- 600 patients with a case management nurse

## **Västra Götaland**

- Started in April, 2012
- Currently includes 2 target groups in 2 RCTs
- 1000 patients with a case management nurse

## **Uppsala**

- Started in January, 2013
- 2 RCTs
- 300 patients and three case management nurses

## **Sörmland**

- Starting in June, 2013
- 2 RCTs

# Evidence base for CM/DM or *aktiv hälsostyrning*

## Case Management



- Population based stratified randomized study (174,120 individuals)
- Intervention consisting of coaching for self care, teaching and shared decision making

Results from the intervention:

- Reduced health care costs
- Reduced number of admissions

## Disease Management



THE COCHRANE  
COLLABORATION®

- Meta-analysis of 25 randomized studies (8 323 participants)
- Research the effect of telephone and/or telemonitoring based nurse programs in comparison to standard treatment for CHF patients

Results from the intervention:

- Reduction of CHF related admissions and health care costs
- Increased quality of life, ability and knowledge to handle self care
- Improved functional status according to NYHA classification

Source: Wennberg D.E., Marr A., Lang L., O'Malley S., Bennett G.A *Randomized Trial of a Telephone Care-Management Strategy*, N Engl J Med 2010;363:1245-55. Inglis SC, Clark RA, McAlister FA, Ball J, Lewinter C, Cullington D, Stewart S, Cleland JGF *Structured telephone support or telemonitoring programmes for patients with chronic heart failure. Cochrane Database of Systematic Reviews 2010, Issue 8. Art. No CD007228. DOI: 10.1002/14651858.CD007228.pub2.*

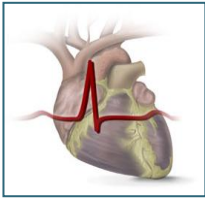


# Case management for five target groups is being evaluated in randomized controlled trials



## Frequent users

- Patients with  $\geq 3$  emergency medical visits during the last 6 months



## CHF

- Patients with  $\geq 1$  admission due to Congestive Heart Failure during the last 12 months



## COPD

- Patients (both in- and outpatient care) diagnosed with chronic obstructive pulmonary disease during the last 12 months



## Children

- Young children whose parents repeatedly seek emergency care due to their children's asthmatic conditions

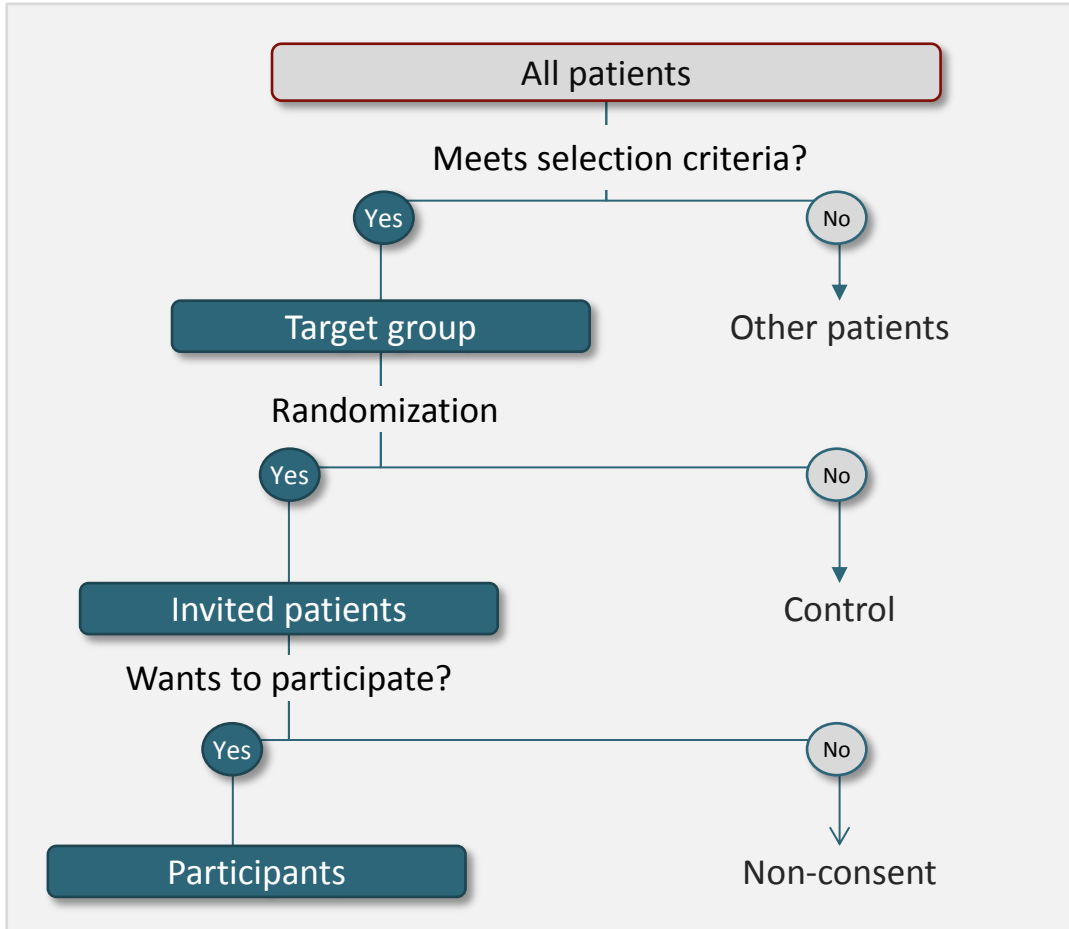


## Emergency psychiatry Obesity in children (from 2013)

- Patients who often seek care at psychiatric emergency rooms
- Pregnant obese and children with high risk for obesity

# Study design and endpoints evaluated

## Study design



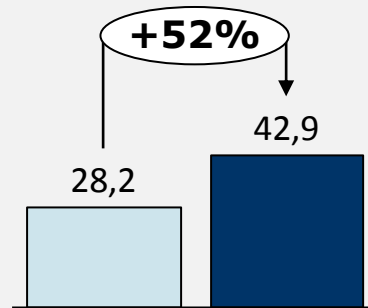
## Primary endpoints evaluated

- Readmission frequency
- In-patient days of stay
- Health Care Cost
- Quality of Life

# Patients self-rated quality of life (SF-36) has increased during program participation

## Frequent users

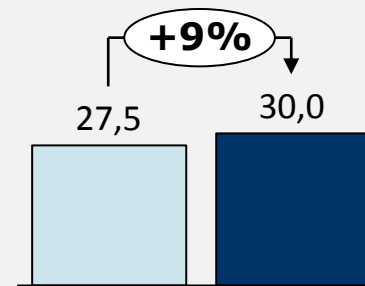
n = 71



Program start    1 year follow up

## CHF

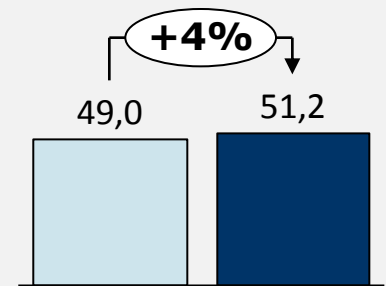
n= 40



Program start    1 year follow up

## COPD

n= 123



Program start    3 month follow up

**Quality of Life**  
Self rated Role  
emotional according  
to SF-36

# Patients state that the best part of the service is related to “soft factors”, such as knowing who to call

## What has been the best part of the service?

*To be able to speak about my state of health with a trustful person who through technology has full insight about my health problems and can answer and explain the questions I ask*

*To be able to discuss, get knowledgeable answers and ask questions I don't have time for in doctor visits*

*Establishing guidelines for me about health*

*To have a contact person in the health care services has been very safe and reassuring for me. Someone I can call if I issues arise and who always supports with advice and tips. All the while being nice and enjoyable to talk to. This option MUST remain!!*

*It has been very reassuring to know that there is someone that can be contacted straight away and get answers from.*

**More data and outcomes will be presented on May 30th...**

# Parts of the development work has been published in scientific journals during 2012



- A recent article in Läkartidningen about how to predict individuals with an increased risk for unplanned admissions
- An article in European Journal of Emergency about telephone based case management and its effects on health care utilization for frequent emergency department visitors