

# PCC as a Learning process

Jan Aidemark

Linda Askenäs

Linnaeus University

# Introduction

- Research in e-health
  - perspectives from systems planning applied to the Patient Centered Care - PCC concept
  - Inspirations from several IS areas, strategic planning, planning methodologies, Knowledge management, learning theory etc
- Research background mainly in IS/IT

# Purpose

- The research aims to explore how information systems and information technology (IS/IT) could be used to support a PCC strategy
- Build on a learning tradition within IS/IT and to apply this to the task of planning and designing IS/IT support for PCC activities and processes.
- A literature review that focuses on the connection between pressing PCC issues and current theoretical frameworks, concept and models.

# PCC

- Patient centered care
- Patient-centered care (PCC) is an emerging approach to health care
- Goals: costs and better care quality
- PCC is a break in a traditional disease-oriented model of care
- A coherent definition of PCC is still to appear,
- 3 key points:
  - a) patient involvement in care and
  - b) the individualization of patient care”.
  - c) In the center of this definition lies the interaction between patient and caregiver in the hope of a better quality of care, increased patient satisfaction and higher patient adherence

# KM

- Knowledge management, some different approaches
- KM-systems – the use of IS/IT to support knowledge process – a class of systems
- Organisational learning: an approach to manage, lead and organise; and to gain competitive advantages
- Combinations: a strategic planning framework for the joint development of information systems and business processes as a part of strategic organisational development effort

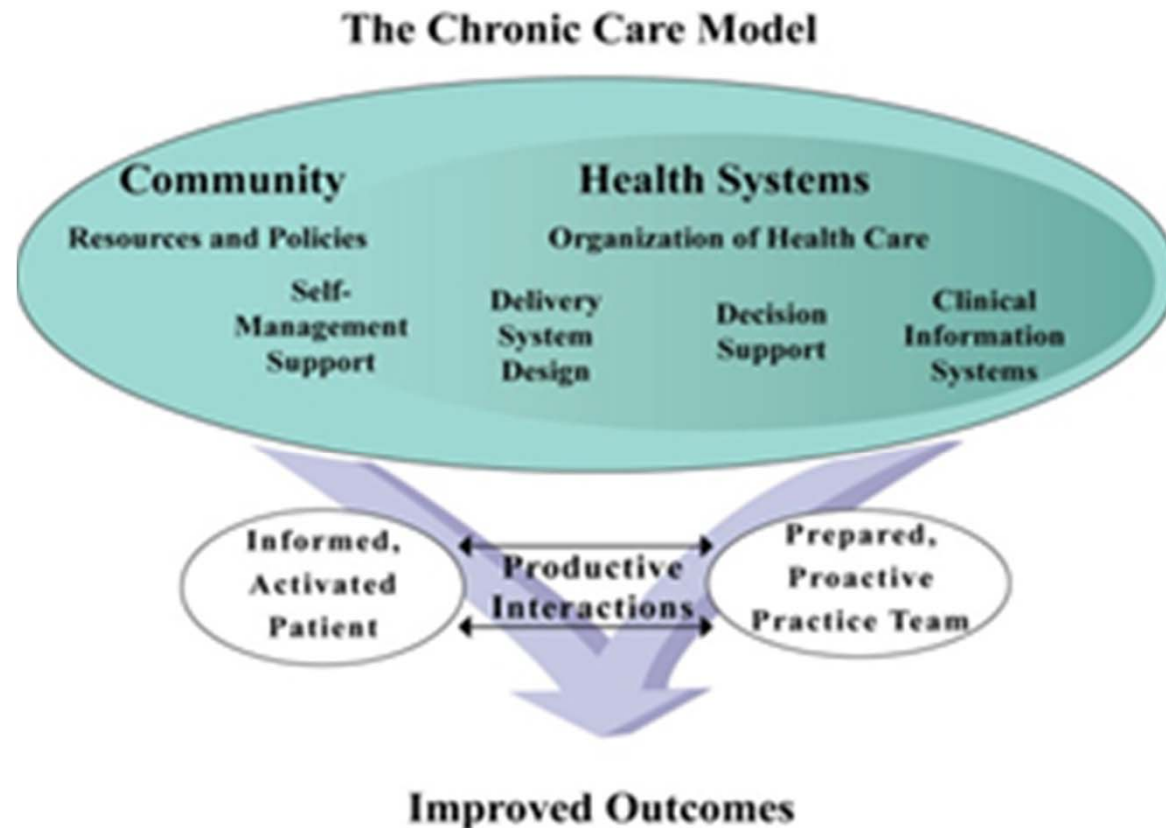
# Planning models

- Planning theory: develop a model of the planning process:
  - Provide a framework that guides the thinking during the planning process
  - Create models that gives a picture for all involved, often from different types of backgrounds
  - Provides a common ground for communications
  - Embodies a background theory of how the “world works”, a “weltanschauung”

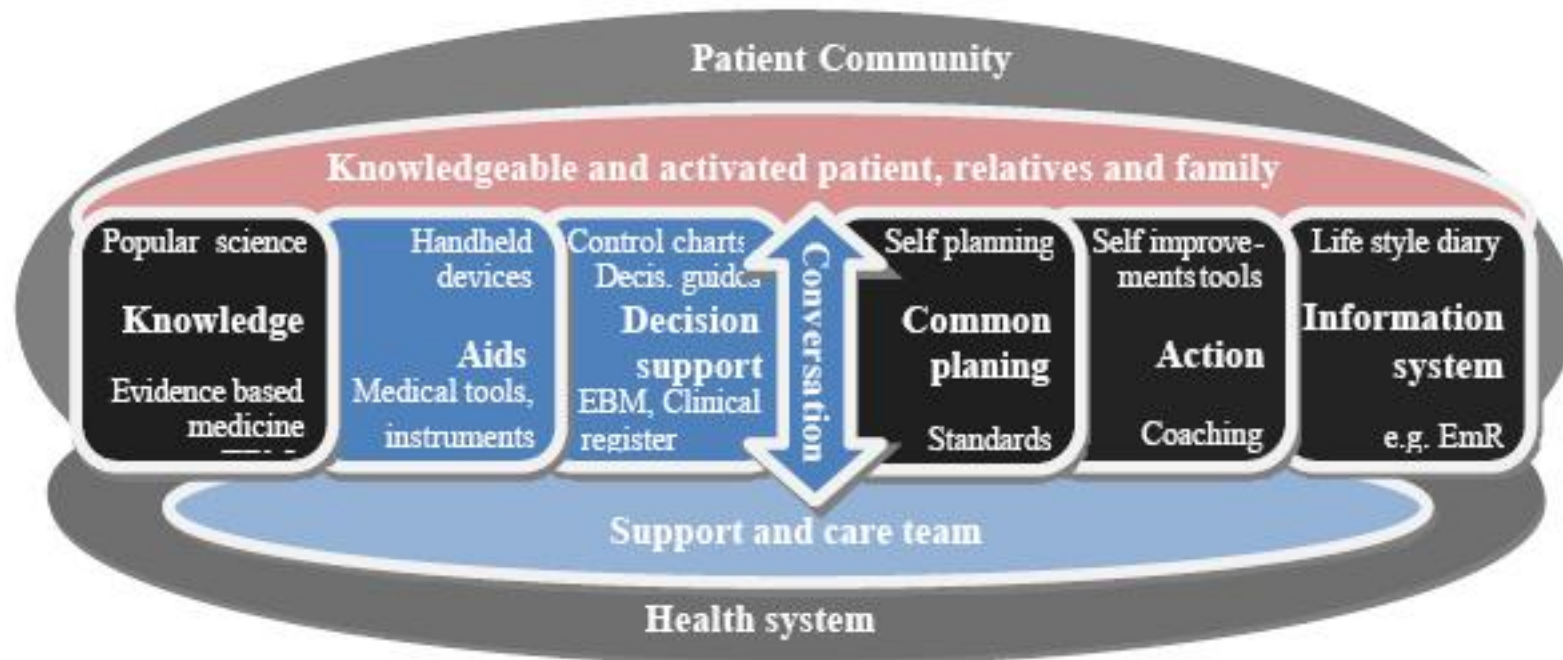
# Systems theory

- Not the operational research, with focus on statistics and algorithms
- Focus on interacting forces, goals and structures, the system as a set of relations
- Soft systems thinking with focus on human activity systems
- Investigations into systems that have multiple reasons of existence, several systems levels, unclear systems borders, many relevant stakeholder groups and definitions of worldview

# Background: The chronic care model



# First steps: The hamburger model



# Learning process

- 1) Patient understanding and personal knowledge.
- 2) Facts/Information gathering.
- 3) Planning/Formulation of alternatives.
- 4) Decision making.
- 5) Action.
- 6) Evaluation and keeping records.
- 7) Patient interaction with health care.

# PCC as a learning process

- 1) Patient understanding and personal knowledge. The patient needs to acquire a general understanding of the situation, its causes and effects, both in the short and the long term.
  - Patient involvement is not enough, the patient must really be engaged in to the care process.
  - A personal understanding of the sickness (example: Forbat et al. 2009)

# PCC as a learning process

- 2. Facts/Information gathering. Here traditional measures are taken to obtain facts about the condition that the patient is in.
  - tailor the care for the individual patient,
  - structured measures to capture this information, ex. patient satisfaction, quality of life and utility,
  - individualize these measures and make patient the active part in measurement,
  - a process over time and not a one time thing.  
(ex. Davidson et al. 2004)

# PCC as a learning process

- 3) Planning/Formulation of alternatives. On the basis of the facts, possible paths of action can be laid out.
  - (Langford, et al., 2007). A framework for a self-management goal cycle has been set as support for the patients
  - 1) Visits, 2) Goal lists, 3) Measurements, 4) Checklists 5) Problem solving

# PCC as a learning process

- 4) Decision-making. Weighing alternatives, choosing the one that is most satisfying, and allocating resources to the chosen path.
  - a support system for home use
  - support like information, decision support, and connections to experts and other patients.
  - The benefits included: patients spending less time during care visits, communicating with health providers by phone and experiencing fewer and shorter hospitalizations.

# PCC as a learning process

- 5) Action. Performing what has been decided on, including medicine, exercise, eating, or some expert treatment that is to be performed.
  - Self-management of care is one approach to create patient centered
  - 1) Patient education and application in real time situations.
  - 2) The patient problem solving skills.
  - 3) Help the patient to act with efficacy,
  - 4) Training patient in recognition of barriers
  - 5) Perform motivational interviews

# PCC as a learning process

- 6) Evaluation and record-keeping. Evaluations are required to understand the outcome of different activities and of the care process as a whole. Here we also consider the record-keeping and information handling needed as support for the administration of the process.

# PCC as a learning process

- 7) Patient interaction with health care (doctors/nurses etc.), is traditionally a face-to-face experience, with phone calls and possibly a written note as support technologies.
- The caregiver helps the patient to come to terms with his or her situation, measures are taken, plans and decisions are made, and actions and records are kept.
- The effectiveness, i.e. to what extent the goals of the care are reached, is determined here.

# Discussion

- Building on current practices of PCC as reported in the literature,
- The model a useful way of understanding the all ready ongoing PCC process
- Most solutions focus on one part, mentions or implies the existence of others.
- Lacks an integrating model for these current practices
- The Patient perspective: how to picture and model the patient process as a learning process

# Parallel processes – how integrate?

- Learning: knowledge development and knowledge transfer in different process and in-between these processes
  - The health care organizational level
  - The care team level
  - The patient level
  - The patient next of kin/ community level

# Design Process Communication

- The contribution of the model is in the area of communication between:
  - Health care experts, stakeholder etc.
  - Systems designer, problem solvers, knowledge integrators
  - Software developers, technical implementation
  - Third hand interest groups, affected parties etc.

# Future work

- Applications in chronic care
- Heart failure – re develop and specialize a model for this area
- Questions:  
what is the status of integrated health care models within PCC
- What are the nature of the interaction between IS/IT support development and development of health care practices

# TNX!

- Questions
- Comments
- Suggestions