Welcome to the 12th Microsystem Festival!
Jönköping, Sweden!

Integration!

Hygeia
Salus
Asclepius
Patogenic
How can integration become one of the most important features for microsystems?

Perfect parts do not make a perfect whole.

It is the interactions of the parts that determine the effectiveness of the whole.

Russell Ackoff

Integration is a profound idea

- Too often in healthcare, we think of “integration” as a technical term, re-engineering pathways of care; e.g., “integrated care”, “integrated health and social care”
- Integration is a far deeper concept; it has spiritual roots and is one of the most powerful sources of sustainable energy for human beings
- A deeper understanding of integration can take us from the Age of Information Society to the Post Digital Society
A warm welcome!

- Armenia
- Australia
- Denmark
- Finland
- Germany
- Italy
- Netherlands
- New Zealand
- Norway
- Qatar
- Singapore
- Slovenia
- Switzerland
- United Kingdom
- USA

Togetherness

- Christian von Plessen
- Gene Nelson
- Laura Hibbs
- Marjorie Godfrey
...and global integration
...Our absent friends....

Welcome to the 12th Microsystem Festival!

It all started in 2004...

Paul Batalden looking for more learning and playing with a microscope to explore microsystems

Connecting explorers
“RIBBON OF FRIENDSHIP”
…our symbol for Integration

These ribbons and the knots on them represent all the friendship bonds that Qulturum, Region Jönköping County has tied with fellow networkers from all over the world.

One ribbon for each country and one knot for every new friendship!

This is a meeting place for tomorrow and the microsystem’s importance

2015 integration
2014 Reflection
2013 Rhythm of change
2012 The heart & art of healthcare
2011 Set your mind free
2010 Let’s energize healthcare
2009 Health care evolution
2008 emPOWERment

2007 Leadership & spread – within healthcare
2006 Micro – Meso – MACRO
2005 Creativity and problem solution
2004 Go to Gemba
The Festival has a world wide uniqueness

Here we find

- Inspiration
- Creativity
- Passion
- Happiness
- Impressions to take home
ReThink Health envisions a “healthy health system”

- Enabling optimal health for individuals and families,
- Assuring access to quality care when and where we need it,
- Promoting greater equity, productivity, and community vitality, and
- Creating conditions to sustain innovations for impact.

http://www.rethinkhealth.org/about-us/vision/
My presentation: about the importance of...

- **Togetherness**
- **Integration**
- Work with the work, person centered process development and interdisciplinary teamwork
- Steal with pride, diffusion and spread

………but most of all about inspirational innovation
To live togetherness and integration

Dreamhack, Jönköping

The Care Center
Virtual reality

To live togetherness and integration?

Attention economy
Me as a part of the attention economy


And welcome to two of the best hospitals in Sweden

ranking list, county hospitals:

1. Ryhov county hospital, Jönköping
2. Värnamo hospital in Värnamo (third last year) and Höglanet, Eksjö, strongest “runner up”
Starta Handsprit-filmen här
https://www.youtube.com/watch?v=ZTB2GAeU174
78 133 has seen the Hand washing video

Develop the robust microsystem
Togetherness, passion, inspiration, patient centeredness

About hand disinfectant, gloves and robustness

Region Jönköping Etc

The Microsystem Festival Feb 24-27 2015
platafel/microsystemfestival

One of ten healthiest areas in the world

- Easy to have a healthy lifestyle here
- Healthcare at the top of the league
- Clean air
- Green areas
- Healthy food
- Excellent public transport

According to this report:
Global AgeWatch Index 2014

Regional Jönköping Etc

The Microsystem Festival Feb 24-27 2015
platafel/microsystemfestival
Welcome also to one of ten coolest innovative counties around the world

Good for Esther = good for all seniors

Officials from Jönköping region and healthcare employees collaborated on a better system to care for the elderly, who frequently ended up in the hospital.

They dreamt up a fictional character Esther, a reasonable self-sufficient 88-year-old pensioner with some chronic issues.

Then they asked: “What is best for Esther?”

This led to an overhaul of the entire care system, which cut down on long waits, redundant tests and repetitive questions from professionals.

The system brings together doctors, nurses, pharmacists, social workers and occupational therapists.

In many cases, the best possible care is at home; it is far more cost effective. And when a hospital stay is required, municipal social care staff go to “Esther’s” home to ensure she has food and a clean bed when she returns.

Co-learning 2014

28 co-learning meetings internationally with people from...

...Scotland
...USA
...Singapore
...Germany
...Qatar
...Wales
...Canada
...Finland
...Danmark
...Holland
...England
...New Zealand
...Norge
...Ireland
Your confidence in the healthcare system in your county / region?

- A lot
- A Little

Source: Vårdbarometern

...and welcome to IKEA country!

- Småland – a Region of furniture
  - Bruno Mattsson
  - Källmo
  - Norrgavel
- IKEA
  - and many other creators and companies

- IKEA - Integration with the customer to complete the product!
Sustainability - robustness

- Modern green environmental platforms are…
  - how to develop ecosystems for people to create
  - safety, support health, wellbeing, borderless acting
    = systems thinking

(for instance city planning and health working together)
• Can we continue to do this…?

• The need to reduce healthcare costs as a percentage of GDP is *urgent*

---

**Everything accelerates**

• **Integration** helps us to find new ways to complete the service with the patient
• **Integration** helps us do radical designs in our processes
• **Integration** can make us see leadership capabilities
• **Integration** of strong feedback - modernize our measurements
Paradigm shift: from input management to individuals management

Input orientation

Action S 1
Action S 2

actions 6

actions 5

actions 4

action3

Management of person orientation

Service concepts

PERSON

Service concepts

From Model of input control vs. Model for individual control

<table>
<thead>
<tr>
<th>Characteristics of...</th>
<th>...input control</th>
<th>...individual control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responsibility and control</td>
<td>Competences and input/efforts</td>
<td>health situation and forms of mediation</td>
</tr>
<tr>
<td>Dominating mediation</td>
<td>Input and reception</td>
<td>Compound service concept</td>
</tr>
<tr>
<td>Primary value</td>
<td>Assessment and implementation of each input</td>
<td>Quality for the individual in combination with efficiency in the health system</td>
</tr>
<tr>
<td>Incentive</td>
<td>Own inputs/efforts</td>
<td>Effective collaboration</td>
</tr>
<tr>
<td>Quality</td>
<td>This specific input</td>
<td>Degree of the ongoing matching between needs and skills</td>
</tr>
</tbody>
</table>

Source: Goran Henriks and Dag Norén
Barriers that we need to overcome

- The health workforce is under pressure and it needs to be emphasized that integrated care can facilitate their working conditions
- Budgetary restrictions
- Limited focus on health in all policies
- Find leadership concepts to foster synergies
- Not enough focus on primary care
- Integrated information system

Examples of great integration
The Self-Hemodialysis Staircase

The staircase is not static. Changes can go both upwards and downwards depending on the patient’s condition and motivation. Training and information is provided along the entire staircase.

Wholeness

The new agenda

Wellness

Prevention

Diagnosis

Treatment

Source: Göran Henriks
Senior alert – a successful integration

From a few to all 2010-2014

www.senioralert.se

Municipalities/Communities

County Councils/Regions

Healthcare systems

Senior alert – a successful integration

Percentage Risk Assessments done and action taken in nursing homes in the municipalities for the Elderly 2011-2014

www.senioralert.se
Weight loss
>5% vs no of days to follow up:

-Per community/municipality 2014:
- Per community: Askersund development 2011-2014

- Per county/region 2014:
“Care support to older people after stroke and hip fracture is fragmented and inefficient. If not, counties and municipalities coordinate their resources for rehabilitation and organize their work in teams; it leads to continued unnecessary suffering and unnecessary costs, sometimes also referred to deaths that could have been avoided.”

Olivia Wigzell and Nina Rehnqvist, the SBU.

Source: "Lagarbete i sjukvården räddar äldres liv" GP 17 februari "Lagarbete i sjukvården räddar äldres liv"

Mobile geriatric team home visit (1.5 hrs)

Results –

1 or more visits in the last 90 days before start N=21

Geriatric Department, County Hospital Ryhov
Daily coordination – a key for integration

Source: Anette Abrahamsson

- Peri-op fluid management
- Epidural Anaesthesia
- Remifentanil
- DVT prophylaxis
- No - premed
- Pre-op counselling
- No bowel prep
- Early mobilisation
- CHO - loading/ no fasting
- Perioperative Nutrition
- Incisions
- Hot air blanket
- No NG tubes
- Oral analgesics/ NSAID’s
- Prevention of ileus/ prokinetics
- Early removal of catheters/drains

*Lassen K et al, Arch Surg 2009: 144: 961-969*
ERAS in the whole system – the challenge

• Out of the patient journey – patient focused

• Communication and collaboration between different departments and staff

• Sustainability…

The patient's path through ERAS*

*Enhanced recovery after surgery

Source: Mari Bergeling
A hospital in the region

Dashboard for continuous monitoring of results

- Median Total Length of Stay: 6.0
- ERAS Compliance: 67%
- Complications (Primary and Follow-up)
- Mortality: X
- Reoperations: Y
- Pts with Complications: Z
- Pts with Serious Complication: A
- Anastomotic Leaks: B

Number of Operations:
- Open colorectal h... 44
- Left hemicolectomy... 28
- Anterior resection... 12
- Total/subtotal colo... 11
- Other large/Small...

Multi disciplinary conferences – pre/breast cancer
The need to reduce health care costs as a percentage of GDP is urgent
Seeing the same map
We need new concepts

- The key is not only the product but the function for the citizens and patients
- The competence base is no longer just what I do…
- ..so how can we best develop collaboration, both internally in the patient journey but also in every meeting?
- This is something profoundly different to pure production logic
• Macro coordinator-integrator
• Micro coordinator-integrator

An integrator's work

Financial opportunities
Non financial opportunities

Microsystem
Mesosystem
Macroystem

Plan and investigate
Plan actions
Improvement needs
Results

Source: Smart Bed Platform
Göran Henriks
Only a click away
Internet 20 years
IPAD  April 2010

Internet and things

Relation with the Customer
Relation
Transaction
Basic
Advanced
Collaboration
Complexity in the service
Building
Offering
Eco system
services
Offering
data
Premium
product
Source: Smart Bed Plattform
Göran Henriks
Bell says: The organization is already working on a **400 gigabit** network, and the long-term goal is a **terabyte per second** network, which about **100,000 times faster** than today’s home connections.

- Google and voice recognition
- Weather
- Transportation
- Connection with your smartphone
- Reminders
- Physical advisor while practicing
- Technic NFS – ready for paying

Source: Sony
The road to telehealth 2.0 is mobile ResolutionMD 5.0

• [LÄNK till filmen](#)
• **The U.S. Department of Veterans Affairs (VA)** operates the nation’s largest integrated health care system, with more than 1,200 hospitals, clinics, community living centers, domiciliaries, readjustment counseling centers, and other facilities.
• **Resolution MD 5.0** will help the VA improve care by accelerating and improving diagnosis and treatment, strengthening collaboration, and expanding telehealth options.
• [https://www.youtube.com/watch?v=kRvgr8rMI64&feature=player_embedded](https://www.youtube.com/watch?v=kRvgr8rMI64&feature=player_embedded)

Calgary scientific

“Mobile access takes away the pain of the after-hours consult and allows me to participate using my mobile device from wherever I am. Using mobile access to patient images makes my knowledge, skills and experience accessible to my trainees, referring providers and patients much more readily and effectively.”

Jason Helvey, MD and neuro radiologist at Nebraska Medicine.
Three Faces of Khresmoi

- Khresmoi for Everyone
- Khresmoi Professional
- Khresmoi Radiology
Kconnect/Khresmoi – EU Innovation/Qulturum

- **End-user adaptation to new languages**, by making available language adaptation toolkits
- **Facilitate integration into online health portals and vertical search solutions**
- **Analysis of patient records**, to allow straightforward implementation of innovative solutions within hospitals
- **Impact and take-up through the effective dissemination and communication** of project results in a Professional Services Community

---

**MOOC** – Massive Open Online Course: Fundamentals of health and care improvements, and Improvement science

Source: NHS Qi/Jönköping Academy/Qulturum
Fundamentals of health and care improvements, and improvement science – a MOOC

On the Internet

4 modules

Geocaching map as a metaphor for searching for
- new learning
- experiences
- networking
- testing own challenges

NHS QI, Jönköping Academy Qulturum

http://vimeo.com/118891486
Module 2:
Example: Two short videos about Microsystem thinking

Module 3:
Example: Two short videos about measurement
The MOOC

For more information talk to:

• Rolf Bardon
• Laura Hibbs
• Cheryl Guest
• Agata Rukat

ReThink Health
http://www rethinkhealth.org

ReThink Health Anytown – Rankings for Each Individual Scenario
What if each initiative was enacted individually and fully in 2012? The simulated results below show selected changes from baseline accumulated over 28 years.

Cumulative Change from Baseline (2012-2040)

<table>
<thead>
<tr>
<th>No Contingent Global Payment, No Insurance Expansion</th>
<th>Health Care Costs</th>
<th>Death Rate</th>
<th>Quality Care</th>
<th>Inequity</th>
<th>Productivity ($B)</th>
<th>Program Spend ($B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline (no Contingent Global Payment, no Insurance Expansion)</td>
<td>0.536</td>
<td>0.754%</td>
<td>44.8%</td>
<td>46.6%</td>
<td>192.5</td>
<td>0.00</td>
</tr>
<tr>
<td>Coordinate Care (with Upgrading)</td>
<td>-4.03%</td>
<td>-0.11%</td>
<td>0.47%</td>
<td>-0.47%</td>
<td>0.32%</td>
<td>0.119</td>
</tr>
<tr>
<td>Healthier Behaviors</td>
<td>-3.75%</td>
<td>-0.42%</td>
<td>1.41%</td>
<td>-1.55%</td>
<td>1.11%</td>
<td>0.412</td>
</tr>
<tr>
<td>Coordinate Care</td>
<td>-2.92%</td>
<td>-0.06%</td>
<td>0.34%</td>
<td>-0.34%</td>
<td>0.23%</td>
<td>0.082</td>
</tr>
<tr>
<td>Genomic Drugs</td>
<td>-1.22%</td>
<td>-0.01%</td>
<td>0.13%</td>
<td>-0.14%</td>
<td>0.09%</td>
<td>0.012</td>
</tr>
<tr>
<td>Environ Health</td>
<td>-1.15%</td>
<td>-0.06%</td>
<td>0.19%</td>
<td>-0.19%</td>
<td>0.29%</td>
<td>0.077</td>
</tr>
<tr>
<td>Crime</td>
<td>-1.01%</td>
<td>-0.15%</td>
<td>0.16%</td>
<td>-0.69%</td>
<td>0.20%</td>
<td>0.288</td>
</tr>
<tr>
<td>Pre-Violent Care</td>
<td>-0.99%</td>
<td>-0.04%</td>
<td>0.27%</td>
<td>-0.09%</td>
<td>0.07%</td>
<td>0.157</td>
</tr>
<tr>
<td>Family Pathways</td>
<td>-0.74%</td>
<td>-1.05%</td>
<td>3.39%</td>
<td>-3.31%</td>
<td>1.09%</td>
<td>2.895</td>
</tr>
<tr>
<td>Post-Discharge Care</td>
<td>-0.65%</td>
<td>-0.06%</td>
<td>0.09%</td>
<td>-0.09%</td>
<td>0.06%</td>
<td>0.036</td>
</tr>
<tr>
<td>Recall PCP (IPAC)</td>
<td>-0.64%</td>
<td>-0.06%</td>
<td>0.14%</td>
<td>-0.15%</td>
<td>0.04%</td>
<td>0.029</td>
</tr>
<tr>
<td>Malpractice</td>
<td>-0.50%</td>
<td>-0.01%</td>
<td>0.00%</td>
<td>-0.05%</td>
<td>0.04%</td>
<td>0.023</td>
</tr>
<tr>
<td>Student Pathways</td>
<td>-0.45%</td>
<td>-0.05%</td>
<td>1.44%</td>
<td>-1.93%</td>
<td>2.14%</td>
<td>0.761</td>
</tr>
<tr>
<td>Shared Decision Making</td>
<td>-0.43%</td>
<td>-0.01%</td>
<td>0.05%</td>
<td>-0.05%</td>
<td>0.04%</td>
<td>0.003</td>
</tr>
<tr>
<td>Hospital Infections</td>
<td>-0.33%</td>
<td>-1.70%</td>
<td>0.02%</td>
<td>0.16%</td>
<td>0.19%</td>
<td>0.036</td>
</tr>
<tr>
<td>PCP Efficiency</td>
<td>-0.27%</td>
<td>-0.04%</td>
<td>0.20%</td>
<td>-0.04%</td>
<td>0.02%</td>
<td>0.043</td>
</tr>
<tr>
<td>Hospital Efficiency</td>
<td>0.05%</td>
<td>0.05%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.05%</td>
<td>0.055</td>
</tr>
<tr>
<td>Recall PCP (General)</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.195</td>
</tr>
<tr>
<td>Hospital</td>
<td>0.04%</td>
<td>0.00%</td>
<td>-0.02%</td>
<td>0.02%</td>
<td>0.01%</td>
<td>0.042</td>
</tr>
<tr>
<td>Mental Health</td>
<td>0.03%</td>
<td>-1.27%</td>
<td>3.90%</td>
<td>-1.41%</td>
<td>1.66%</td>
<td>0.206</td>
</tr>
<tr>
<td>Pain/Caregiver Care</td>
<td>0.03%</td>
<td>-1.44%</td>
<td>8.10%</td>
<td>0.01%</td>
<td>0.07%</td>
<td>0.062</td>
</tr>
<tr>
<td>Medical Home</td>
<td>1.14%</td>
<td>-0.72%</td>
<td>3.79%</td>
<td>0.02%</td>
<td>-0.02%</td>
<td>0.023</td>
</tr>
<tr>
<td>Self-Care</td>
<td>1.04%</td>
<td>-3.50%</td>
<td>20.52%</td>
<td>-1.46%</td>
<td>0.53%</td>
<td>0.042</td>
</tr>
</tbody>
</table>
Please enjoy life in a post-digital new world

• A service is a relationship and it is worth nothing unless the benefits are realized
• Departments and organizations prevent us from seeing the benefits and value
• Goods and products are distribution mechanisms
• Knowledge, skill and expertise can not be invested in, in the same way as fixed assets
• The service is the ultimate experience - services in the process of distribution mechanisms
• The patient and individual is always co-creator of the result
• Organization and structure only create conditions
• Organizations need relationships with customers
• Economists integrate resources

The value is based on experience

Please enjoy life in a post-digital new world with integration

Sandro Botticelli: The birth of Venus at the Uffizi Gallery, Florence