



Tranzo Scientific Centre for Care and Welfare

Aarhus, December 2, 2013

- **Mission:**
to connect science and practice
- **Aim:**
to develop and exchange knowledge,
to promote evidence based working

Tranzo's Academic Collaborative Centers

- Geestdrift
- Public Health
- Chronic Care
- Policy for the elderly and informal care
- **Quality of care by GP's and hospitals**
- “Prevention Assured” (Individual prevention)
- Living with an intellectual disability
- Addiction
- Interlink Health Economics



Quality of Care GP's and Hospitals (2005)

Central theme: Quality of Care

Main partners:

- Netherlands Institute for Health Services Research
- Dutch Health Care Quality Institute
- Several hospitals, GP's

Special professors:

- Dinny de Bakker (2008, NIVEL)
- Diana Delnoij (2008, CVZ/Kwaliteitsinstituut)
- Roland Friele (2008, NIVEL)

Coördinator: Bert Meijboom



Academic Collaborative Centers: a good model?

- Long-term collaborative ventures between university and (care) organisations.

Two pillars:

- Long-term research programme
- Knowledge exchange: building a knowledge infrastructure + stimulate working evidence based

➤ Essential: so-called ‘science practitioners’

What are ‘science practitioners’?!

- work in daily practice of healthcare provision (e.g, hospital, home care)
- become part-time researchers
- their normal work environment will benefit from their activities!

Personal research focus:

- Chain care, integrated care



Specialisation in health care

- multidisciplinary collaboration
- multiple health care providers

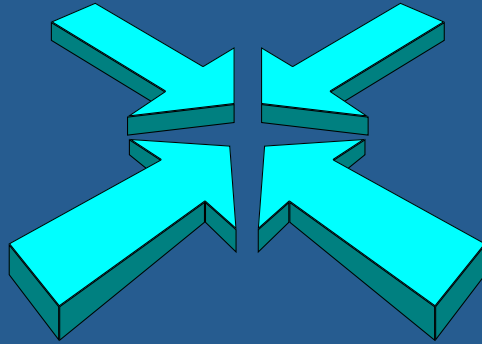


Challenges for organizational design,

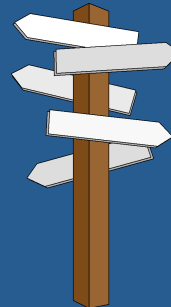
- coordination tasks / responsibilities allocated to parties
- agreements regarding mutual information provision and communication
- etc.

Challenge

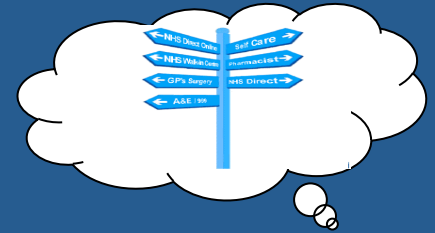
“Although patients are in need of coherent care, ...



... we are often not able to supply coherent care.”



Chain Care



- Improve service to patients with complex needs requiring treatment from several care providers
- Crossing organizational boundaries (and even sector boundaries of health care and social care)
- Centred around individual users
 - Services should appear coherent, coordinated and seamless

Examples

- Integrated delivery of care, housing and welfare
 - Modular service platforms
- Access to care
 - Front-office / back-office design
- Care chains, clinical pathways
 - Inspired by supply chain management practices
 - *Today: integration GP and EM-departments*



INTEGRATED EMERGENCY DEPARTMENTS: AN IMPROVEMENT?

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Out of hours emergency care in The Netherlands

Ambulant
emergency
service

Emergency
psychiatric
department

GP co-operative

Emergency
department

Out of hours emergency care in The Netherlands

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Emergency
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GP co-operative

Emergency
department

Out of hours emergency care

GP co-operative

- Urgent primary care
- Financed by:
 - Budget
 - Fixed budget per inhabitant x number of inhabitants

Emergency department

- Urgent specialized care or diagnostics
- Financed by:
 - Mainly Diagnosis Treatment Combinations (DTCs)
 - Fixed and/or negotiated budget per DTC

*Ideally, GP co-operative and
ED should work together
perfectly and function
complimentary...*

However, in daily practice ...

- EDs have to deal with inappropriate (self-referred) attenders
 - Inappropriate use of services
 - High costs
 - Overcrowding
 - Lengthening queues

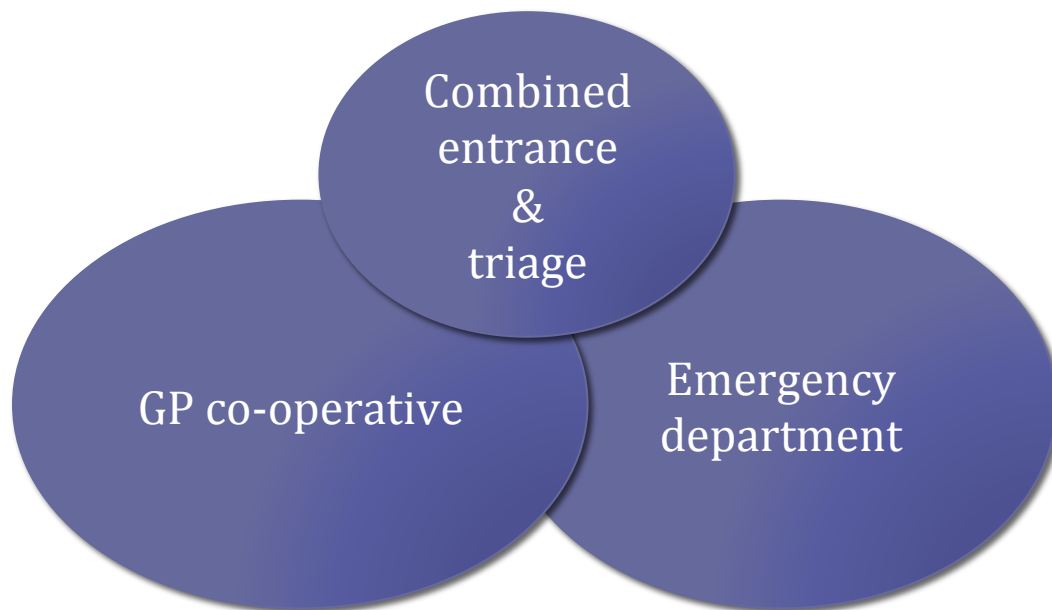
Integrated emergency departments

GP co-operative

Emergency
department

Integrated emergency departments

- 23% of GP co-operations collaborated with EDs in 2007
- Combined entrance
- Based on a system of triage, patients are allocated to GP co-operative or ED



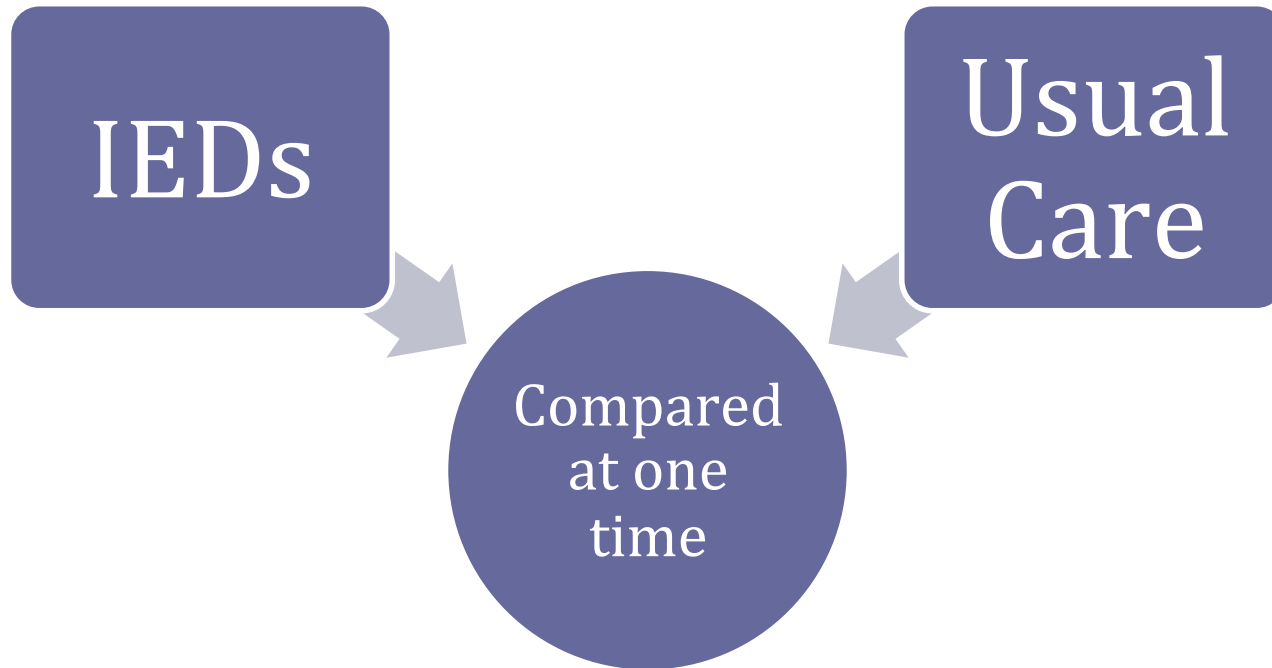
Potential advantages of IEDs

- Shift from EDs to GP co-operatives
- More often right care at the right place
- Increased collaboration
- Both parties preserve their own philosophy and specialism

Integrated emergency departments: an improvement



Study design



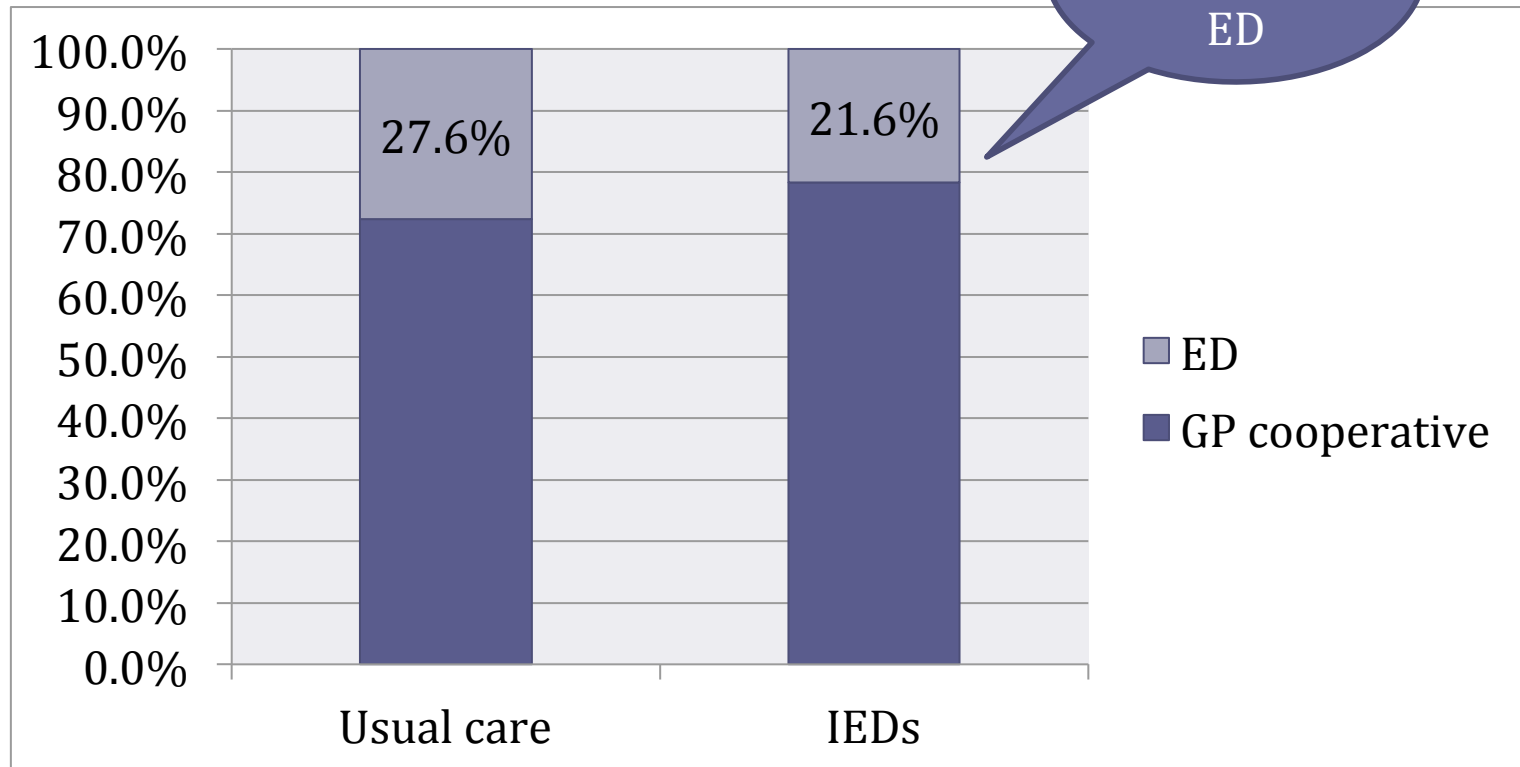
What did we investigate?

- A. Shift from ED to GP cooperative
- B. Further issues:
 - 1. Patient flow, length of stay and waiting time
 - 2. Patient experience
 - 3. Employee experience
 - 4. Cost effectiveness

A. Shift from ED to GP co-operative

- To what extent do IEDs elicit a substitution from EDs to GP co-operatives?
- In which way does this shift result in differences in population characteristics of GP co-operatives and EDs?
- Which factors affect the probability of being treated at the ED?

Substitution from EDs to GP cooperatives?



Comparison of Usual care and IEDs:

Urgency

	Usual care (n=63.441)		IEDs	
	GP (n=45,934)	ED(n=17,507)	GP (n=45,961)	ED(n=12,659)
Urgency*				
Very urgent	3,628 (64.1%)	2,030 (35.9%)	5,625 (63.6%)	3,216 (36.4%)
Medium urgent	13,142 (74.8%)	4,544 (25.7%)	16,634 (71.3%)	6,703 (28.7%)
Less urgent	29,164 (85.1%)	5,126 (14.9%)	23,702 (90.9%)	2,381 (9.1%)

Treatment by GP co-operative or ED?

Influence of urgency

- Total population
 - (compared to medium urgent)
 - Treatment ED 2.2x more likely when very urgent
 - 1.6x less likely when less urgent
- Usual care vs. IEDs
 - (compared to usual care)
 - Treatment ED 1.2x less likely when very urgent
 - 1.3x smaller when less urgent

A comparison of Usual care and IEDs:

Symptom/disease cluster

	Usual care (n=63.441)		IEDs (n=58.620)	
	GP(n=45,934)	ED(n=17,507)	GP(n=45,961)	ED(n=12,659)
Symptom/disease *				
Acut somatic	18,287 (97.2%)	519 (2.8%)	19,634 (97.8%)	436 (2.2%)
Infections	8,610 (93.7%)	581 (6.3%)	7,605 (92.9%)	577 (7.1%)
Trauma	7,258 (62.0%)	4,449 (38.0%)	8,178 (80.3%)	2,009 (19.7%)
Chronic/long lasting	4,100 (75.6%)	1,326 (24.4%)	3,110 (70.1%)	1,326 (29.9%)
Other	2,87 (92.7%)	211 (7.3%)	2,304 (83.9%)	441 (16.1%)

Treatment by GP co-operative or ED?

Influence of symptom/disease cluster

- Total population
 - (compared to 'infections')
 - Treatment ED 7.5x more likely if symptom in cluster 'trauma'
 - 1.2x more likely if 'chronic/long lasting'
- Usual care vs. IEDs
 - (compared to usual care)
 - 2.1x less likely for 'trauma'
 - 1.2x more likely if 'chronic/long lasting'

What did we investigate?

- A. Shift from ED to GP cooperative
- B. Further issues:
 - 1. Patient flow, length of stay and waiting time
 - 2. Patient experience
 - 3. Employee experience
 - 4. Cost effectiveness

B1. Patient flow, length of stay and waiting time (IEDs vs. usual care)

- Patient flow
 - Less patients attend the ED (24.4% vs. 29.7%)
 - More patients contact GP co-operative before ED (10.4% vs. 6.1%)
- Length of stay and waiting time differ greatly between patient flows
 - Shorter length of stay for patients who were referred to the ED by the GP (2:16:17 vs. 2:28:45)
 - GP co-operative: longer length of stay (0:27:21 vs. 0:21:00) and waiting time (0:19:00 vs. 0:15:00)
 - ED: more often waiting times beyond 30 min. (21.7% vs. 18.6%)

B2. Patient experience (IEDs vs. usual care)

- High patient satisfaction in both settings
- Experienced cooperation GP co-operative and ED higher in IEDs (8.03 vs. 5.67)

B3. Employee experience (IEDs vs. usual care)

- Three topics:
 - Quality of care
 - Co-operation
 - Workload
- GP co-operative employees experience
 - lower workload (2.71 vs. 2.88)
- ED employees experience
 - higher workload (3.34 vs. 2.98)
 - better cooperation (3.37 vs. 3.11)

B4. Cost effectiveness (IEDs vs. usual care)

- Cost effectiveness analysis just started
- Integrated Emergency Departments not cheaper or more expensive than usual care

Conclusions so far...

- ED has to deal with 22% less patients in the IED setting
- IEDs enhance provision of right care at the right place
- More patients have to wait longer in IEDs
- In IEDs patients experience more collaboration between ED and GP co-operative
- GP co-operative employees experience a lower workload, ED employees a higher workload and better collaboration
- IEDs not cheaper or more expensive

To be continued...

