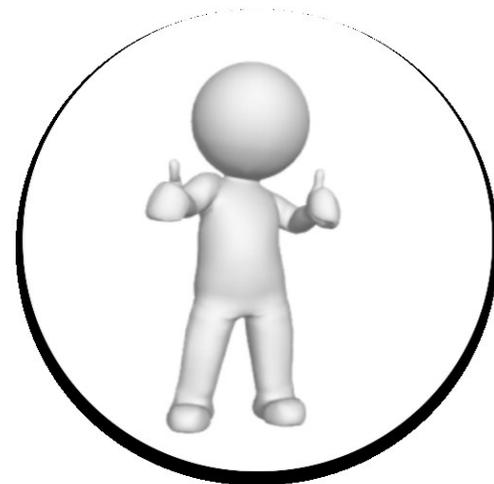


SMART-IBD

M.J. Pierik

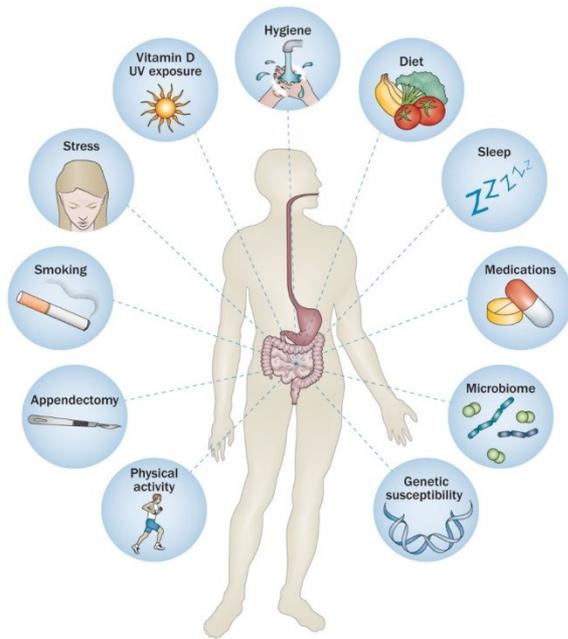
08-05-2019

m.pierik@mumc.nl



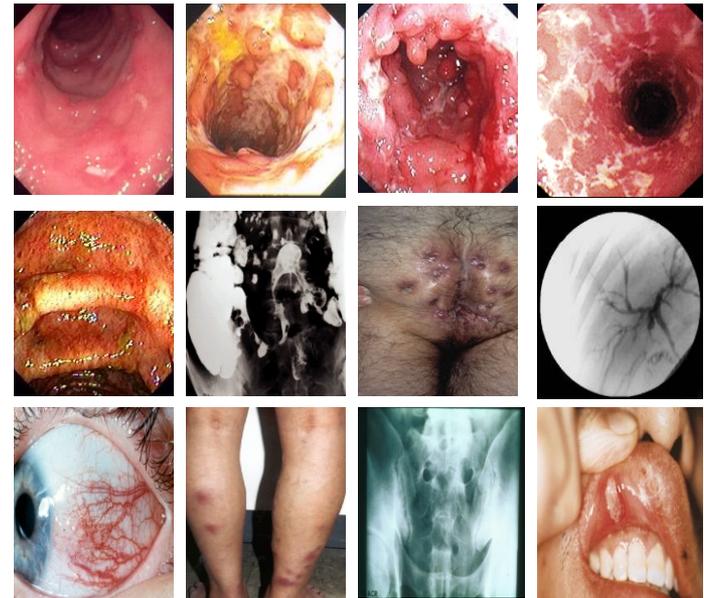
Inflammatory Bowel Disease

Multifactorial background



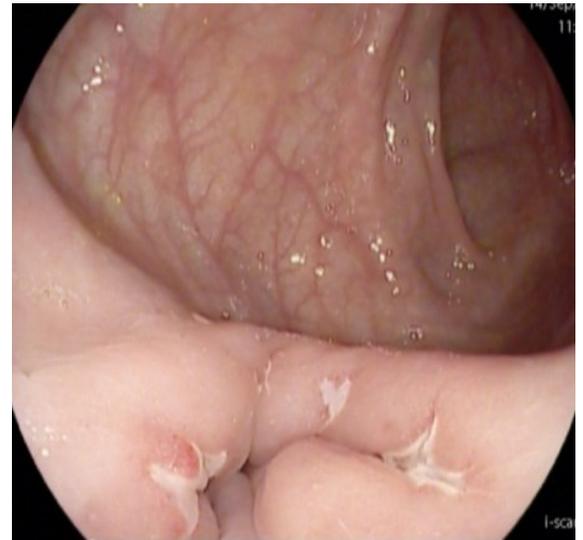
Nature Reviews | Gastroenterology & Hepatology

Heterogeneous presentation and treatment response



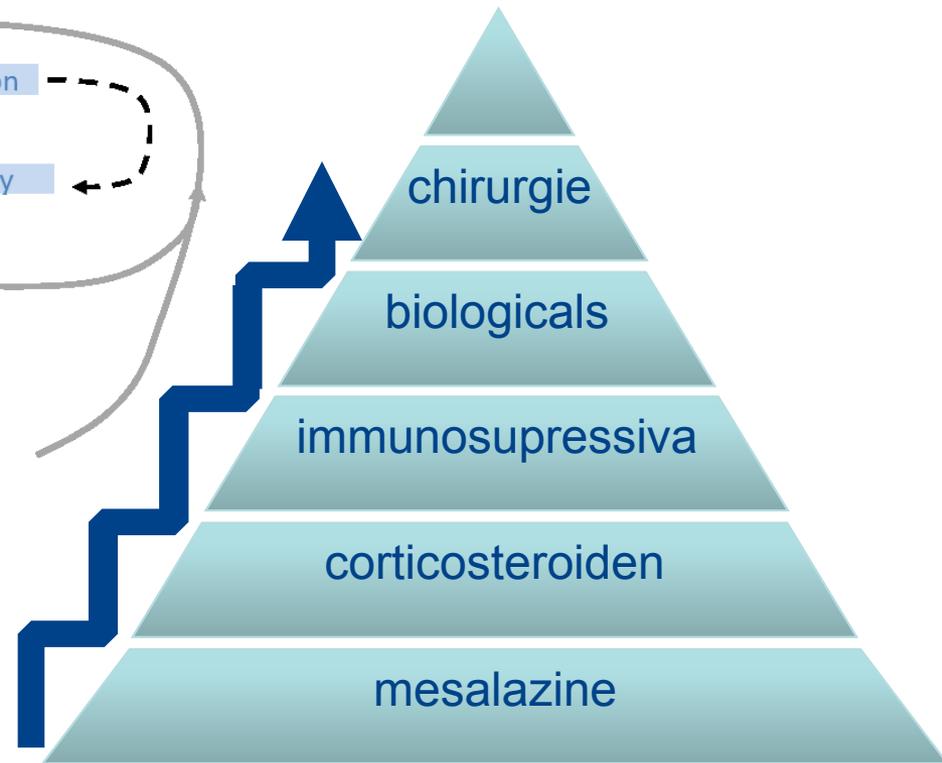
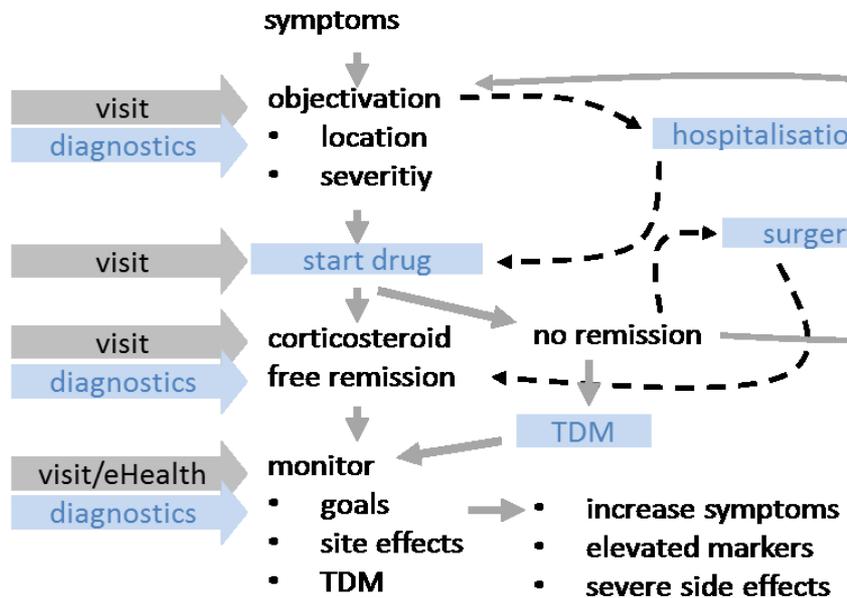
♀ AGE 17

- Since weeks
 - 4 soft stools a day
 - Tired +++
 - Perianal abces
- Clinical examination
 - L 162 cm, W 47 kg
 - Pain deep palpation right lower abdomen



Treatment IBD

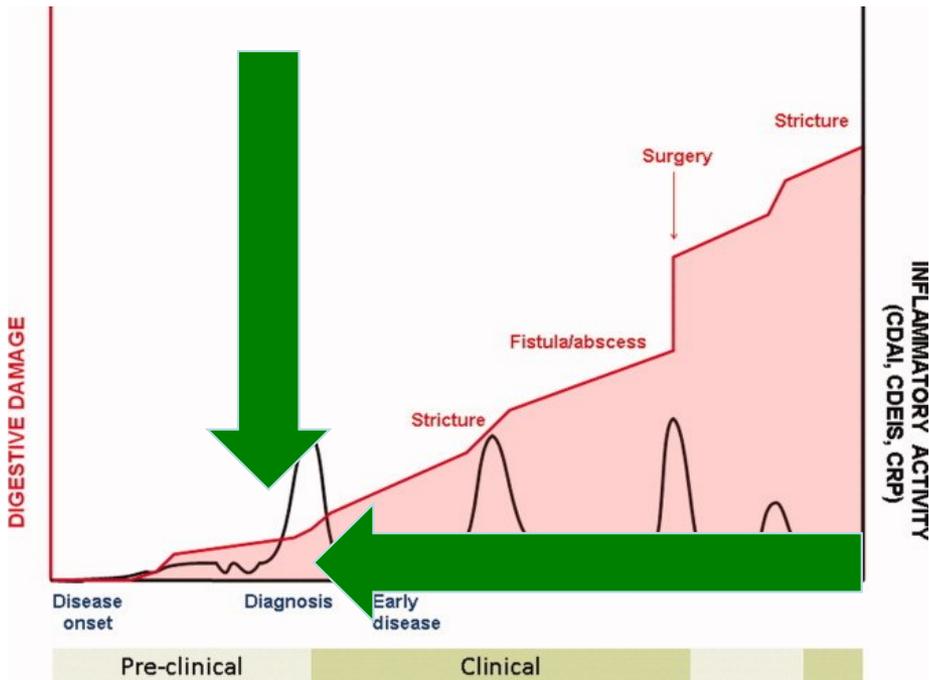
- cycle of care Crohn's disease
- - - → cycle of care severe, complicated or refractory Crohn's disease



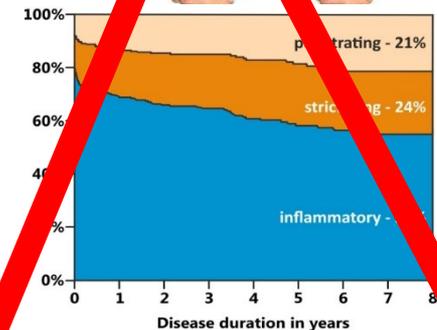
Treatment IBD

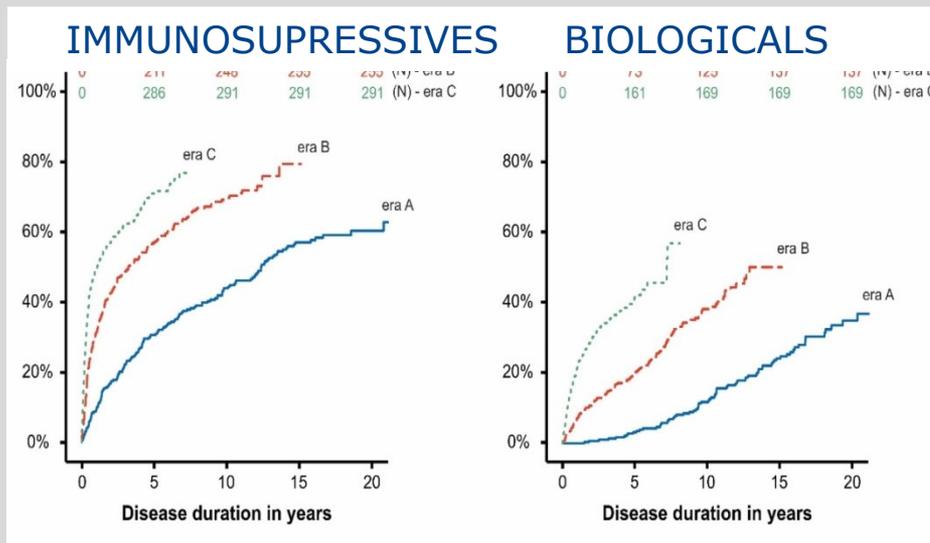
CONTROL INFLAMMATION

- More aggressive approach
- New goals: endoscopic remission



Pariente B et al Inflamm. Bow. Dis. 2011





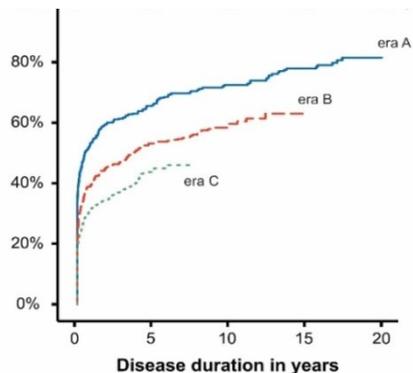
PATIENTS DIAGNOSED

- FROM 1991 TO 1998
- FROM 1999 TO 2005
- FROM 2006 TO 2011

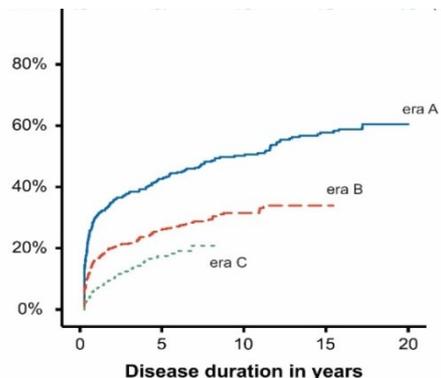
Inflammatory Bowel Disease Description of the population



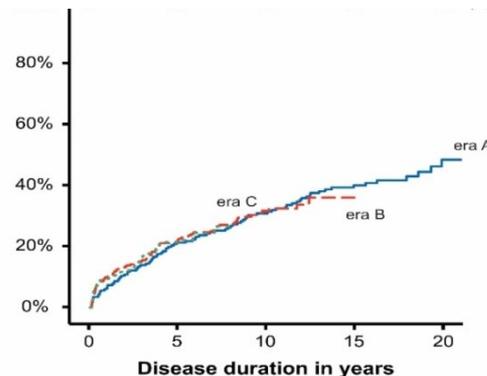
HOSPITALISATIONS



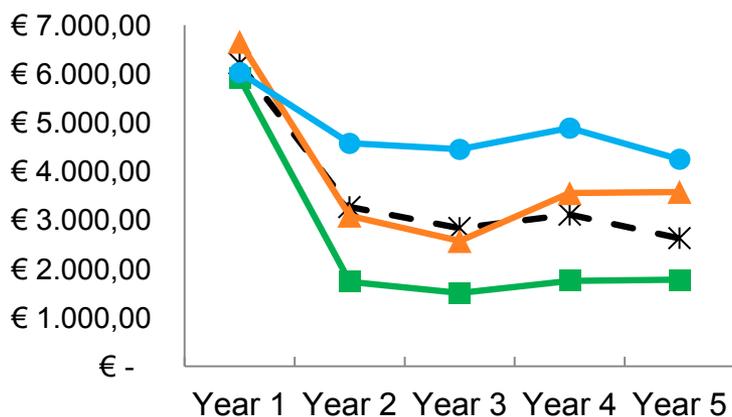
SURGERY



DISEASE PROGRESSION



DIRECT HEALTH CARE COSTS



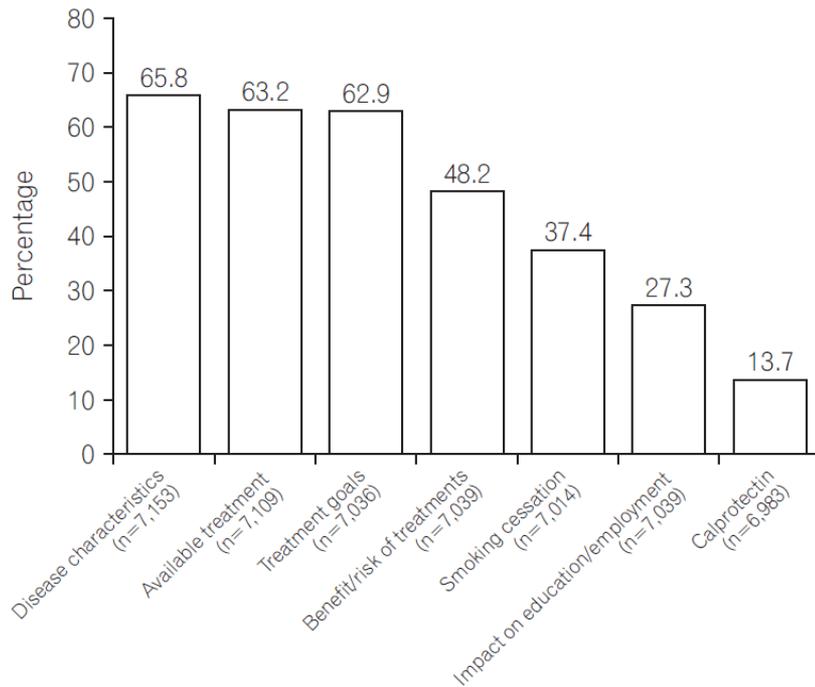
Jeuring et al. Am. J. Gastroenterol 2017
Lalisang et al. JCC sup. 2018

♀ AGE 17

	11-04-2017 10:23	11-04-2017 12:33	11-04-2017 12:34	12-06-2017 15:17	12-06-2017 15:18	22-09-2017 15:03	22-09-2017 15:04	31-10-2017 14:58	01-11-2017 15:21	13-12-2017 14:54	13-12-2017 14:55	13-12-2017 14:56	23-03-2018 15:26	23-03-2018 15:29	23-03-2018 15:30	22-06-2018 15:15	22-06-2018 15:16	22-06-2018 15:20	02-08-2018 15:31	14-09-2018 16:04	
▲ Hematologie - EDTA																					
Hemoglobine			9.0		9.3		9.3				9.1				9.0	9.8					
MCV					88		87				89				92	90					
Trombocyten					258		308				288				269	251					
Leucocyten			6.5		7.2		7.1				5.6				8.5	6.4					
▲ Chemie - Serum																					
Kreatinine		93		81		87				80				82			88				
eGFR CKD-EPI		>90.0		>90.0		>90.0				>90.0				>90.0			>90.0				
Alk. fosf.				100		92				82				82			77				
gamma-GT		21																			
ALAT		15		17		19				17				15			14				
Bilirubine		6.5																			
Lipase				15		15				18				19			16				
CRP		10		1		<1				<1				<1			<1				
Albumine		38.5																			
▲ Chemie speciaal - Serum/Plasma																					
Ferritine		131		74		104				101				83			138				
▲ Chemie - Faecesportie																					
Calprotectine (FEIA)	16							<15			<15	<15									
Calprotectine refiv.	TEKST..							TEKST..			TEKST..	TEKST..									
Calprotectine																	<15.0	20	29		
Ref. calprotectine																	TEKST..	TEKST..	TEKST..		
▲ Biologics - Serum																					
Infliximab concentratie									7.8												
Infliximab antistoffen									<12												

- Diarrhoea after meals, not eating during day
- Fears incontinence and stays home from school
- Smokes at parties

Quality of Care for people with IBD



- Communication
 - Quality communication with specialist
 - Speed of advice flare
- Duration of visits
- Access to dietician, psychologist,..
- Shared decision making
- Personalised information
- Patient empowerment
- Indirect costs

IBD2020 forum questionnaire, Irving et al Intest. Research 2018

Novel Statistical Approach to Determine Inflammatory Bowel Disease: Patients' Perspectives on Shared Decision Making

Corey A. Siegel¹ · Jennifer H. Lofland² · Ahmad Naim³ · Jan Gollins⁴ · Danielle M. Walls⁵ · Laura E. Rudder⁶ · Chuck Reynolds⁶

Published online: 12 May 2015
© Springer International Publishing Switzerland

Abstract
Background Limited information is available on perspectives of shared decision-making

Digestion

Original Paper

Digestion 2010;81:113–119
DOI: [10.1159/000253862](https://doi.org/10.1159/000253862)

Received: May 7, 2009
Accepted: October 8, 2009
Published online: January 9, 2010

Patients' Preferences regarding Shared Decision-Making in the Treatment of Inflammatory Bowel Disease: Results from a Patient-Empowerment Study

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Departments of ^aGastroenterology and Hepatology, and ^bInternal Medicine, Erasmus MC, Rotterdam, and ^cDutch Patients' Association of Crohn's Disease and Ulcerative Colitis, Breukelen, The Netherlands

Key Words
Inflammatory bowel disease · Shared decision-making · Patients' preferences

Abstract
Background: Shared decision-making is gaining favor in clinical practice, although the extent to which patients want

to be involved is not clearly defined. Shared decision-making is commonly associated with a disease duration of 0.03. Gender and type of IBD were not associated with patients' preferences. Our study demonstrates IBD patients' desire to be involved in the decision-making process. Further research is needed to find predictive factors for developing shared decision-making in IBD. COG

Shared Decision Making and Treatment Satisfaction in Japanese Patients with Inflammatory Bowel Disease

Jorg Mahlich^{a, c} · Katsuyoshi Matsuoka^b · Rosarin Srumsiri^{a, d}

^aHealth Economics, Janssen Pharmaceutical KK, and ^bDepartment of Gastroenterology and Hepatology, Tokyo Medical and Dental University, Tokyo, Japan; ^cDüsseldorf Institute for Competition Economics (DICE), University of Düsseldorf, Düsseldorf, Germany; ^dCenter of Pharmaceutical Outcomes Research, Naresuan University, Phitsanulok, Thailand

Keywords
Inflammatory bowel disease · Treatment satisfaction · Japan

Conclusions: Physicians should expect best patient compliance when they and their patients are in agreement with the extent to which treatment decisions are shared. This in turn maximizes the likelihood of successful treatment outcome.

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Dig Dis Sci (2015)
DOI: [10.1007/s10620-015-3675-z](https://doi.org/10.1007/s10620-015-3675-z)

Abstract

ORIGINAL ARTICLE

Gastroenterologists' Views of Shared Decision Making for Patients with Inflammatory Bowel Disease

Corey A. Siegel¹ · Jennifer H. Lofland² · Ahmad Naim^{2,3} · Jan Gollins⁴ · Danielle M. Walls⁵ · Laura E. Rudder⁶ · Chuck Reynolds⁶

Received: 24 October 2014 / Accepted: 17 April 2015 / Published online: 5 May 2015
© The Author(s) 2015. This article is published with open access at Springerlink.com

Abstract
Background There is limited information on gastroenterologists' perspectives of shared decision making (SDM) in discussions of therapeutic agents with inflammatory bowel disease (IBD) patients.
Aims To examine gastroenterologists' perspectives about SDM with IBD patients, using a novel statistical hybrid approach to analyze qualitative data.
Methods Physician interviews and online surveys were conducted from a panel of gastroenterologists in April 2012. Gastroenterologists were asked about their barriers to SDM, SDM practices, relationship to their patients, knowledge of SDM, and insights into SDM implementation. Key audio

excerpts adapted from the interviews were used for moment-to-moment affect trace analysis in an online survey. Cluster analysis was used to segment gastroenterologists into mutually exclusive provider groups.
Results One hundred and six gastroenterologists completed the survey (88 % male; 55 % ≤ 50 years of age). Over three-fourths of gastroenterologists were familiar with SDM (77 %). The vast majority of gastroenterologists (80 %) tried to use a form of SDM with their patients; only 12 % stated that they have a systematic, consistent, and formally documented approach to SDM. Three unique physician clusters were identified: SDM Believers (20 %, n = 20); SDM Skeptics (47 %, n = 47); and SDM Enthusiasts (34 %, n = 34). The three key barriers to practicing SDM were lack of the following: time (74 %), reimbursement (70 %), and tools (51 %). Twenty-two percent of gastroenterologists do not currently use SDM tools.

Conclusions Gastroenterologists lack the systematic approaches and tools for implementing SDM within their IBD

These data have been presented in part at the American College of Gastroenterology Annual Meeting on October 22, 2012, in Las Vegas, NV.

Electronic supplementary material The online version of this article (doi:10.1007/s10620-015-3675-z) contains supplementary material, which is available to authorized users.

Initiatives to Improve Quality of Care

1. Initiatives that Define Quality Indicators
2. Value Based Care Initiatives
3. Self Learning Health Systems



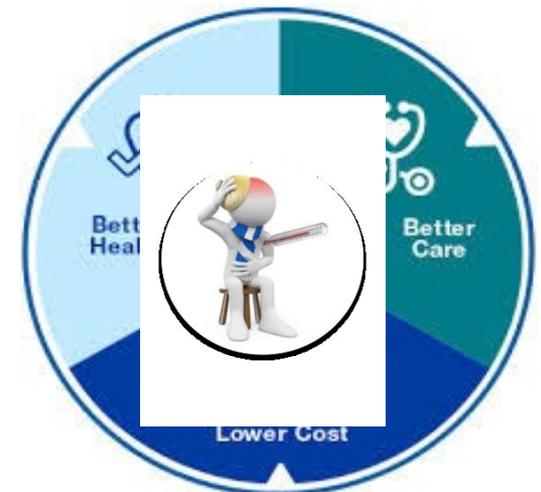
3. Value Based Health Care?

- “Improving value requires improving outcomes per unit of cost”
- “Better health is inherently less expensive than poor health”
- “Earlier detection, correct diagnosis, appropriate treatment,and other steps that improve outcomes can also dramatically lower direct costs & indirect costs of poor health, such as lost work time

- Treatment Goal for all = High value for patients

- Value =
$$\frac{\text{Outcome from patient perspective}}{\text{Costs}}$$

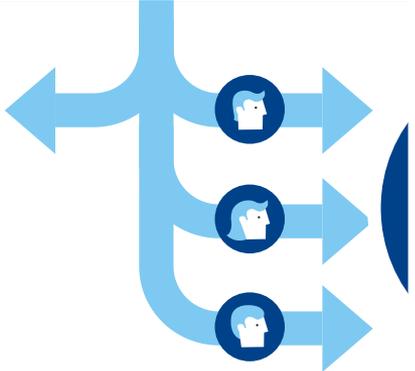
- Structural measurement & transparent reporting
 - Costs
 - PROMs
 - PREMS





SMART-IBD

- Measure, analyse and report all OUTCOMES
- Healthcare Professional ROs
 - PROs and PREs
 - Disease modifiers
 - Costs
- Tight control
- Improve stratification
- Improve communication
- Decision support
- Patient empowerment





DECISION SUPPORT



QUALITY INDICATOR

DASHBOARD



DATA

IMPROVED STRATIFICATION



STRATIFICATION

**COSTS
HPROs**

DRUGS

**PROs, PREs
MODIFIERS**

HIS



eHEALTH



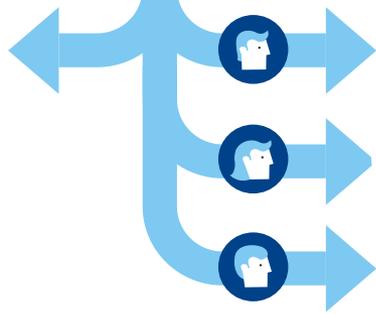
REGISTRATION

CAREPATHWAY

CAREPATHWAY

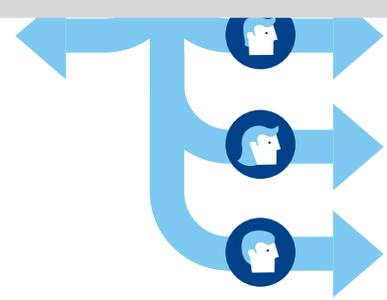
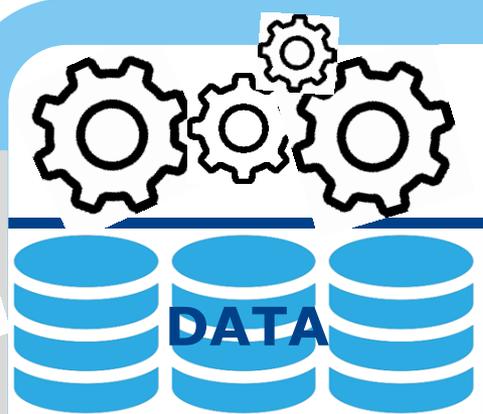
CAREPATHWAY

VALUE





Ziekenhuis informatie systeem

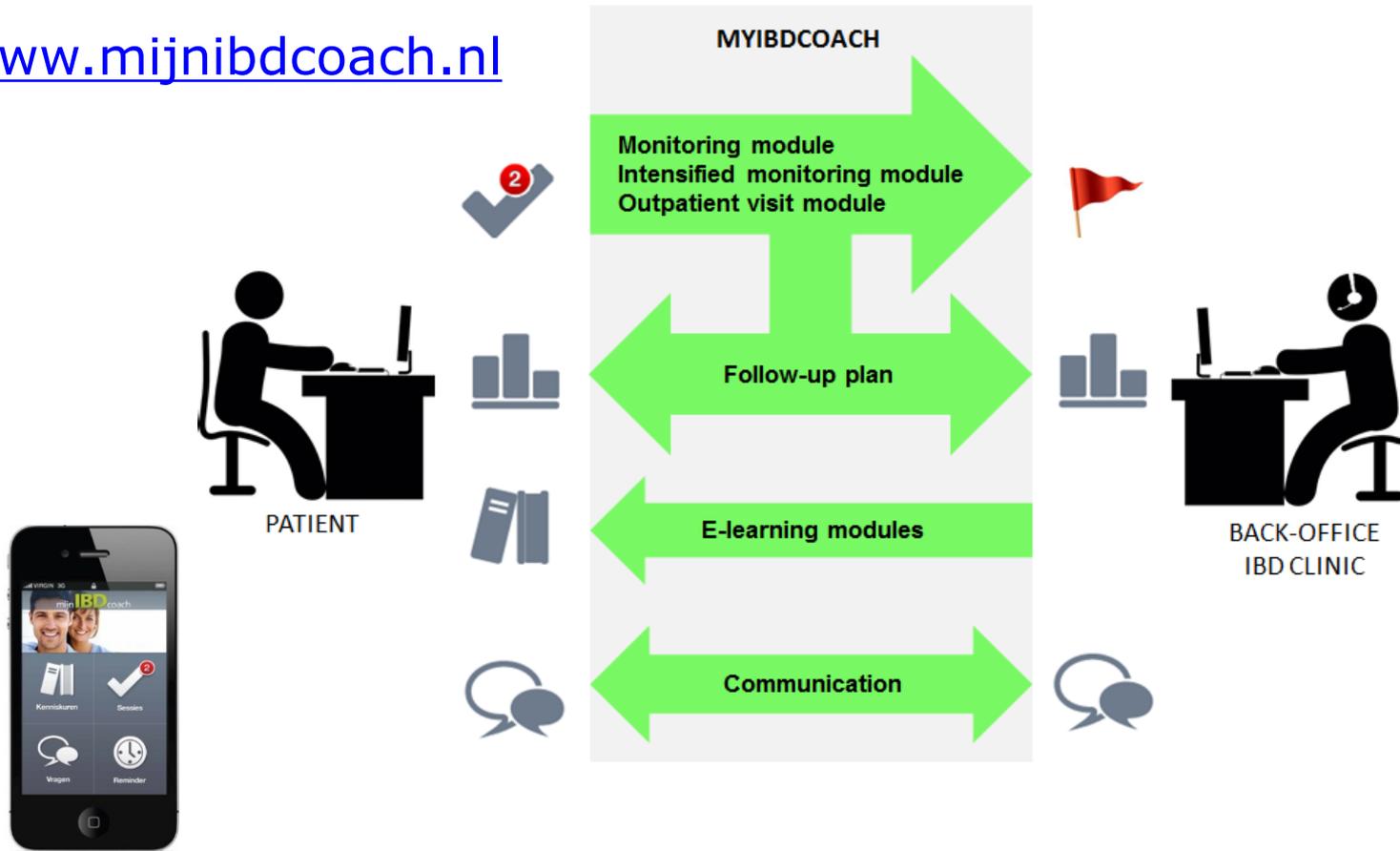


ZORGPAD
ZORGPAD
ZORGPAD



SMART-IBD mijnIBDcoach

www.mijnibdcoach.nl



SMART-IBD: myIBDcoach

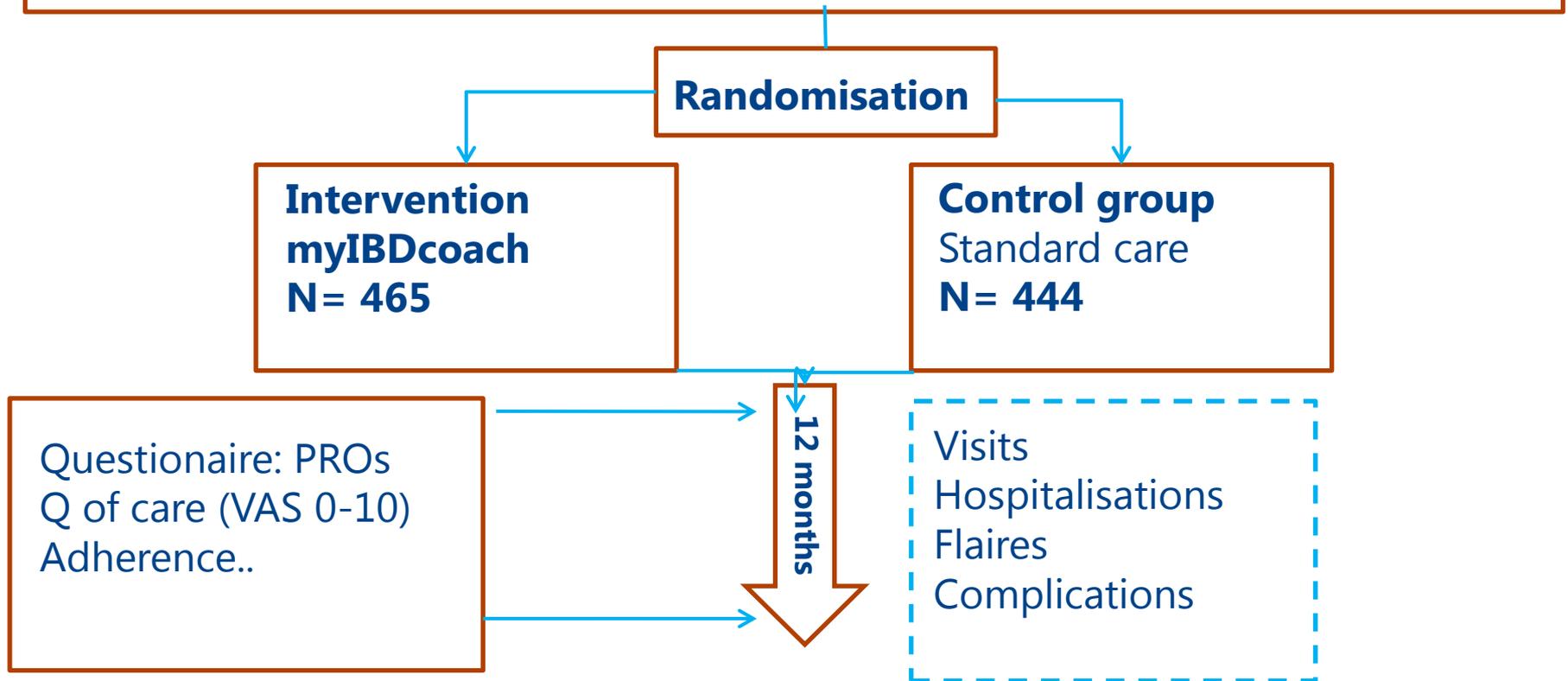


IBD
SPECIFIC

myIBDcoach: RCT

Inclusion criteria: IBD 18-75 years

Exclusion criteria: No internet, insufficient knowledge Dutch language



SMART-IBD: myIBDcoach

Interventielijst | Mijn cliënten | Sessies | Mededelingen

MijnIBDcoach4.0

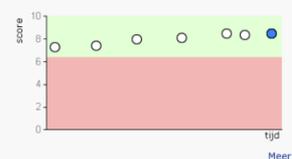
Clientgegevens | Controles | Zorgplan | Kenniskuren | Berichten | ICHOM

De periodieke gezondheidscheck*

Ziekteactiviteit Ziekte van Crohn

Ziekteactiviteit IBD (8,418956)

Groen = laag risico op actieve ontsteking
Rood = verhoogd risico op actieve ontsteking
Blauw = meting van sessie in beeld



Extra Intestinale Manifestaties en complicaties

Extra Intestinale Manifestaties

- Heeft u last gehad van uw gewrichten? Nee
- Heeft u last gehad van een oogontsteking? Nee
- Heeft u last gehad van erythema nodosum? Nee
- Heeft u last gehad van pyoderma gangrenosum? Nee
- Heeft u last gehad van hidradenitis suppurativa? Nee
- Heeft u last gehad van hidradenitis suppurativa? Nee
- Heeft u last gehad van aften (>5)? Nee
- Heeft u last gehad van een fissuur? Nee
- Heeft u last gehad van fistels rondom de anus? Nee, ik heb geen fistel
- Heeft u last gehad van een abces rond de anus? Nee
- Heeft u sinds de laatste keer dat u contact had met uw behandelaars, wel eens ongewild ontlasting of vocht via de anus verloren? Nee

Aandachtsgebieden

- Algemeel welbevinden: Heel erg slecht Heel erg goed [Meer](#)
- Aantal doorgemaakte infecties: [Meer](#)
- Medicatierouw: Nooit Altijd [Meer](#)
- Werking medicatie: Niet Goed [Meer](#)
- Vermoeidheid: Altijd Zelden [Meer](#)
- Voedingstoestand: Slecht Goed [Meer](#)
- Exacerbatie management: Niet Precies [Meer](#)
- Somberheid: Altijd Zelden [Meer](#)
- Angst: Altijd Zelden [Meer](#)
- Schaamte: Altijd Zelden [Meer](#)
- Sociale steun: Geen Veel [Meer](#)
- Steun werkgever: Geen Veel [Meer](#)
- Sport en beweging: Nauwelijks Dagelijks [Meer](#)
- Belasting / stress: Veel Geen [Meer](#)

Questionnaire(s)

- Kwaliteit van Leven ED-5Q-5L: 25 5 [Meer](#)
- IBD Control-8(14): Slechts mogelijke controle Best mogelijke controle [Meer](#)
- IBD Control-VAS (100): Slechts mogelijke controle Best mogelijke controle [Meer](#)
- Percentage productiviteitsverlies dagelijkse activiteiten (WPAI-GH4): 100 0 [Meer](#)

SMART-IBD VALUE

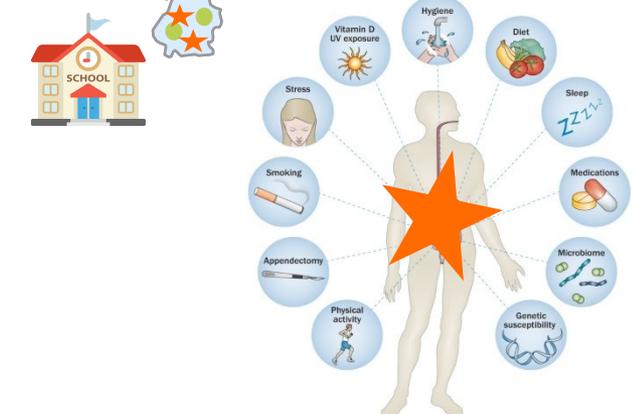
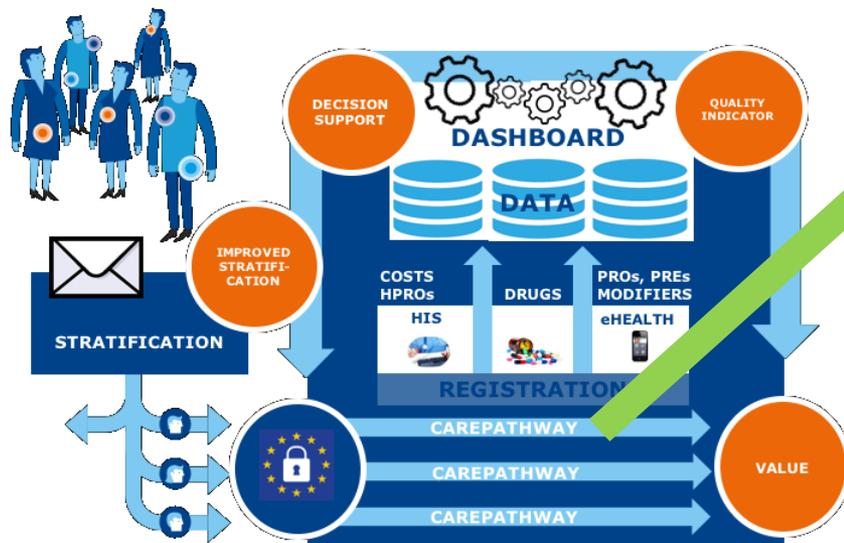
- Efficient
 - 37% reduction control visits
 - 50% reduction hospitalisations
 - Reduction mean costs €554 per patient per year 95%CI[€-987,2.094]
- Safe
- High PRE quality of care
- Increased PRO adherence
- Improved communication and disease knowledge

De Jong et al. Lancet 2017



SMART-IBD NETWORK AND SCHOOL

Learning network for health care professionals and the patient organisation CCUVN aiming to improve the outcome of Crohn's disease and ulcerative colitis



PREVENTION VAN PROGRESSION
MONITOR INFLAMMATION

IMPROVE OUTCOME
PATIENT PERSPECTIVE

1976

Clinical
remission



1989

endoscopic
remission



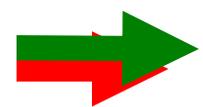
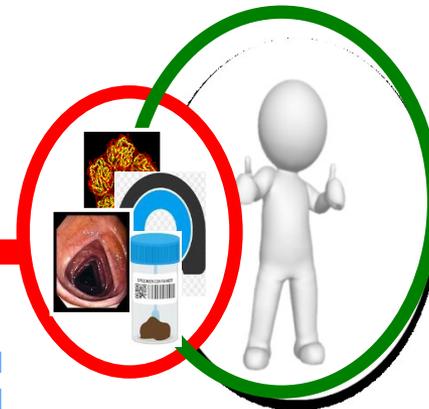
2009

radiologic
remission



2019

Integral management
+ PRO
+ PRE
+ Modifiers
+ Costs



CRP
1981

fecaal
calprotectin
2000

Steroïd free clinical
endoscopic
biochemical
radiologic remission
2017

SMART-IBD team



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ValueBased HealthCare | *Nominee Prize 2017*



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